DRAFT

Draft Subsequent Environmental Impact Report

Aquabella Specific Plan Amendment Project

MAY 2024

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
ACC	Advanced Clean Cars
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AF	acre-feet
AFY	acre-feet per year
AICUZ	Air Installation Compatible Use Zone
ALUCP	Airport Land Use Compatibility Plan
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
ATCM	Airborne Toxic Control Measure
BenMAP	EPA Benefits Mapping and Analysis Program
bgs	below ground surface
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CalGEM	California Geologic Energy Management Division
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CASSA	Criteria Area Species Survey Area
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CH4	methane
City	City of Moreno Valley
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNRA	California Natural Resources Agency
CO	carbon monoxide

Acronym/Abbreviation	Definition
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CRHR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibel
dbh	diameter at breast heigh
DEH	Riverside County Department of Environmental Health
DIF	development impact fee
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
du/acre	dwelling units per acre
EIC	Eastern Information Center
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EMWD	Eastern Municipal Water District
EO	Executive Order
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESL	Environmental Screening Level
EUI	Energy Use Intensity
EV	electric vehicle
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FICON	Federal Interagency Committee On Noise
FTA	Federal Transit Administration
GHG	greenhouse gas
GSA	Groundwater Sustainability Agency
GSP	groundwater sustainability plan
GWP	global warming potential
HAP	hazardous air pollutant
HARP2	Hotspots Analysis and Reporting Program Version 2
HCP	Habitat Conservation Plan
HERO	Human and Ecological Response Office
HFC	hydrofluorocarbon
HIA	health impact assessment
HMBP	hazardous materials business plan
HPI	Healthy Places Index

Acronym/Abbreviation	Definition
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
IPCC	Intergovernmental Panel on Climate Change
ips	inches per second
IS	initial study
kBTU	thousand British thermal units
KOP	key observation point
LACM	Natural History of Los Angeles County
L_{dn}	day–night average noise level
L_{eq}	equivalent noise level over a given period
LHMP	Local Hazard Mitigation Plan
LOS	level of service
LST	localized significance threshold
M	Richter magnitude
March ARB	March Air Reserve Base
MATES V	Multiple Air Toxics Exposure Study V
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MDP	master drainage plan
MERV	Minimum Efficiency Reporting Value
mg/L	milligrams per liter
mgd	million gallons per day
MM	Mitigation Measure
MMT	million metric tons
MND	mitigated negative declaration
MPO	metropolitan planning organization
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MT	metric tons
MVFD	Moreno Valley Fire Department
MVPD	Moreno Valley Police Department
MVU	Moreno Valley Electric Utility
MVUSD	Moreno Valley Unified School District
MWD	Metropolitan Water District of Southern California
N2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEPSSA	Narrow Endemic Plant Species Survey Area
NFPA	National Fire Protection Association
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOP	Notice of Preparation

Acronym/Abbreviation	Definition
NO_x	oxides of nitrogen
NPDES	National Pollution Discharge Elimination System
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OSHA	Occupational Safety and Health Administration
PA	Planning Area
PCB	polychlorinated biphenyl
PDF	project design feature
PFC	perfluorocarbon
PGA	peak ground acceleration
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
PV	photovoltaic
RCFCWCD	Riverside County Flood Control and Water Conservation District
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RHNA	Regional Housing Needs Assessment
ROW	right-of-way
RPS	Renewables Portfolio Standard
RSL	regional screening level
RTP	Regional Transportation Plan
RUHSMC	Riverside University Health System Medical Center
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SARA	Superfund Amendments and Reauthorization Act
SARWQCB	Santa Ana Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SCS	Sustainable Communities Strategy
SEIR	Subsequent Environmental Impact Report
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SJGB	San Jacinto Groundwater Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	short-lived climate pollutant
SMARA	Surface Mining and Reclamation Act of 1975
SMGB	California State Mining and Geology Board

Acronym/Abbreviation	Definition
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
SO_x	sulfur oxides
SPA	Specific Plan Amendment
SR	State Route
SRA	State Responsibility Area
SVOC	semi-volatile organic compound
SWP	State Water Project
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	traffic analysis zone
TCR	tribal cultural resource
TDM	transportation demand management
TDS	total dissolved solids
TIA	traffic impact analysis
TMDL	total maximum daily load
topo	topographic
TTLC	Total Threshold Limit Concentration
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
UWMP	urban water management plan
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WLC	World Logistics Center
WQMP	water quality management plan
WQO	water quality objective
WSC	Western Science Center
WUI	wildland urban interface
ZEV	zero-emissions vehicle

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1 Introduction

This Draft Subsequent Environmental Impact Report (Draft SEIR) has been prepared for the City of Moreno Valley (City) for the Aquabella Specific Plan Amendment Project (Amendment 2; Project) in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines. CEQA requires local and state agencies to identify the potential significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. The CEQA Guidelines are found in the California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387, and CEQA is codified at California Public Resources Code, Sections 21000–21189.91.

The purpose of this Draft SEIR is to review the existing conditions, analyze potential significant environmental impacts, and identify feasible mitigation measures or alternatives to reduce the Project's potentially significant effects compared to previous project analyses and approvals. Chapter 3, Project Description, provides the project objectives and descriptions of the Project's construction and operational components. Chapter 4, Environmental Impact Analysis, discusses the regulatory environment, existing conditions, environmental impacts and significance determinations, and project design features and mitigation measures associated with the Project. Following public review of the Draft SEIR, the City will require completion of a Final SEIR, in which the City will respond in writing to public comments on the Draft SEIR.

This Draft SEIR has been prepared on behalf of the City as the lead agency under CEQA. The Project provides plans and a new vision to guide the continued implementation of the Aquabella Specific Plan site and bring significant public benefits, housing, and economic benefits to the City and the region. The Project would include land use and other changes to accommodate 15,000 multifamily and workforce housing options; a 49,900 square-foot mixed-use commercial and retail Town Center with a 300-room hotel; approximately 80 acres of park space composed of a 40-acre lake, a 15-acre lake promenade encircling the lake, and an additional 25 acres of parkland; approximately 40 acres of schools with up to three elementary school sites and one middle school site; public services and facilities; infrastructure improvements; and other facilities and amenities. The Specific Plan Amendment (included as Appendix A in this SEIR) contains the updated land use and other plans, site development standards, design guidelines, and implementation measures necessary to implement the new vision for the Aquabella residential and mixed-use planned community. The Project applicant is T/Cal Realty II, a Delaware LLC (Project applicant or applicant). The Project site is located in the City of Moreno Valley, east of Interstate 215, south of State Route 60, and north of Lake Perris.

1.1 Previous Analysis/Approvals and Subsequent EIR

The Final EIR for the Moreno Valley Field Station Specific Plan (original SP 218) (State Clearinghouse [SCH] No. 93113076) (1999 EIR) was certified in 1999 and evaluated the impacts of mixed-use residential, retail/commercial, school, and recreational development in the Specific Plan Area. In 2003, the City completed and certified a Supplemental EIR, which further evaluated traffic and biota impacts associated with the Field Station Specific Plan (2003 Supplemental EIR).

In 2005, the applicant sought a Specific Plan Amendment (SPA) to SP 218 for the Aquabella site (2005 Aquabella SPA). An Addendum was adopted pursuant to CEQA, which evaluated the potential significant environmental impacts arising from the 2005 SPA (2005 Addendum). The 2005 Aquabella SPA proposed up to 2,922 single-family and multifamily homes, 2,702 of which were to be age-restricted; 25 acres of commercial area; 40 acres of lakes; a 300-room hotel; and other infrastructure, circulation, open space, facilities, and amenities. The 1999 EIR, the

2003 Supplemental EIR, and the 2005 Addendum are incorporated herein by reference and available for public inspection and review upon request to the City.

This Draft SEIR is prepared in compliance with the CEQA Guidelines Sections 15162, which provides that:

A. When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
    a. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
    b. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
    c. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
        i. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
        ii. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
        iii. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
        iv. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

This Draft SEIR follows the previously approved 1999 EIR, 2003 Supplemental EIR, and 2005 Addendum and focuses on issues that may present changes to the current Project or its circumstances or provide new information of substantial importance under CEQA Guidelines Section 15162. Specifically, the City has determined it is appropriate to prepare an SEIR to address potential changes or new information resulting from the current Project's proposed land use changes and increased residential density. Pursuant to CEQA, this Draft SEIR will focus on these areas that triggered subsequent review.

This subsequent analysis will also provide updated information concerning existing conditions on the Project site and in the Project area, including grading and development that has already occurred consistent with prior project approvals under the 1999 EIR, the 2003 Supplemental EIR, and the 2005 Addendum. Updated existing conditions will generally act as the baseline for analysis in this SEIR.

This Draft SEIR also considers whether new information of substantial importance exists that requires an updated analysis. The City notes that certain updates to the CEQA Guidelines or other regulations have occurred since the time of the original EIR. The City considers whether such information is "new information of substantial

importance" or, conversely, whether the information was known or could have been known or addressed when the prior EIR was certified.[1]

This Draft SEIR is intended to fully analyze the effects of the current Project and its changes consistent with CEQA requirements. Certain information is provided for informational purposes, but it does not trigger further analysis under CEQA Guidelines Section 15162 or for other purposes. Further detail concerning the prior scope of review is provided in Chapter 4, Environmental Impact Analysis.

1.2 List of Discretionary Project Approvals

The Project consists of the following discretionary approvals, which would be submitted and processed concurrently:

- **Specific Plan Amendment (SPA) (PEN 23-0109)** – The Aquabella SPA would update and modify previous Specific Plan No. 218 to take advantage of the "center city" location and to establish a prominent destination for area residents and workers to live and recreate within a vibrant hub for the City and region. The SPA is needed to provide additional housing opportunities for residents and area workers and families seeking to take advantage of the site's location within central Moreno Valley, proximity to major job centers, efficient transportation network, sustainable lake features, and other amenities. The SPA would provide updated development standards and design guidelines for the further proposed development within the Project site and add one approximately 10-acre parcel to the eastern boundary of the Project site (APN: 486-310-014).
- **General Plan Amendment (GPA) (PEN 23-0127)** – A GPA would be required to (a) change the 2040 General Plan Land Use & Community Character Element Table LCC–1, Development Potential and Jobs-Housing Balance, and related text to update projected housing and job numbers to include the Aquabella Specific Plan Amendment Project; (b) change the 2040 General Plan Table LCC-3, Downtown Center Illustrative Development Program (Net New Development 2020-2040), to reflect the updated Downtown Center development program by including the Aquabella Specific Plan Amendment Project; and (c) change 2040 General Plan Map LCC-4, General Plan Land Use, to reflect the land use designation change of the approximately 10-acre parcel on the eastern boundary of the Project site (APN: 486-310-014) from R5 Residential to Downtown Center (Aquabella Specific Plan).

  If the 2006 General Plan is operative at the time of approval, the Project would require a GPA to amend the 2006 General Plan Land Use Map, Figure 2-2 to accommodate the Project.

- **Change of Zone (CZ) (PEN 24-0041)** - A proposed change of zone would rezone the approximately 10-acre parcel on the eastern boundary of the Project site from R5 Residential (R5) District to DC-SP (SP 218) in order to incorporate the parcel into the Project boundary so it will be subject to the zoning, design, and development requirements therein.
- **Subsequent Environmental Impact Report (SEIR) Certification (PEN 23-0111)** – Certification of this SEIR (State Clearinghouse Schedule No. 2023100145) prepared in conformance with CEQA would ensure that

[1] See, e.g., Ruegg & Ellsworth v. City of Berkeley (2021) 63 Cal.App.5th 277, 307 [recognizing tribal cultural resource requirements operate only prospectively]; Citizens Against Airport Pollution v. City of San Jose (2014) 227 Cal.App.4th 788, 805-809 [addition of GHG guidelines was not new information requiring an SEIR because the potential impact of GHGs was widely known when the EIR was certified], Concerned Dublin Citizens v. City of Dublin (2013) 214 Cal.App.4th 1301, 1320 [new GHG guidelines did not require a SEIR where potential effects could have been addressed when 2002 EIR was certified]; Fort Mojave Indian Tribe v. Department of Health Services (1995) 38 Cal.App.4th 1574, 1605 [new regulation designating critical habitat for an endangered tortoise species was not "significant new information" where environmental review and mitigation measures already considered the effects of the project on tortoise habitat].

the incremental environmental impacts between the Project and the previous approvals are analyzed and considered and that all feasible and reasonable mitigation measures or alternatives are implemented to reduce the identified significant impacts. Overriding considerations will be considered by the City. The SEIR preparation and review process requires public notification, stakeholder input, and community participation.

- Tentative Tract Map No. 38850 (PEN 23-0118) - The Tentative Tract Map would provide the subdivision plans for the Aquabella Specific Plan Area for finance and conveyance purposes. The Tentative Tract Map would consolidate the existing 10 parcels and create an estimated 26 new parcels.
- Development Agreement (PEN 23-0119) - The Development Agreement would be a written agreement between the Project applicant and the City in order to specify the respective obligations of the parties.

1.3 Compliance with CEQA

According to CEQA Guidelines Section 15064(f)(1) and CEQA Section 21100, preparation of an EIR is required whenever a project may result in a significant effect on the environment. An EIR is an informational document used to inform public agency decision makers and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the Project that could feasibly attain most of the basic objectives of the Project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project. CEQA requires that lead agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects.

This Draft SEIR identifies and analyzes the environmental effects of the Project, including the activities associated with the Project, to determine the short-term and long-term environmental effects associated with their implementation. This Draft SEIR discusses both temporary and permanent impacts and direct and indirect impacts of the Project, in addition to significant cumulative impacts associated with other past, present, and reasonably foreseeable future projects.

Based on significance criteria, the effects of the Project are categorized as either “no impact,” “less than significant impact,” “less than significant impact with mitigation incorporated,” or “significant unavoidable impact.” Mitigation measures are recommended for potentially significant impacts to avoid or lessen, to the extent feasible, the Project’s significant environmental impacts. In the event the Project results in significant unavoidable impacts even with implementation of all feasible mitigation measures, the decision makers may approve the Project based on a Statement of Overriding Considerations. This determination requires the decision makers to balance the benefits of the Project to determine if they outweigh the identified significant unavoidable impacts. If the benefits of the Project outweigh the significant unavoidable impacts, such effects may be considered acceptable, and the Project approved.

1.4 Notice of Preparation and Early Consultation

In compliance with the CEQA Guidelines, the City provided opportunities for various agencies and the public to participate in the environmental review process. During preparation of the Draft SEIR, efforts were made to contact various federal, state, regional, and local government agencies, and other interested parties, to solicit comments on the scope of review for the SEIR. This included the distribution of a Notice of Preparation (NOP) to various responsible agencies, trustee agencies, and interested parties. Pursuant to CEQA Guidelines Section 15082 and CEQA Section 21084.4, the City circulated the NOP directly to public agencies (including the State Clearinghouse

Office of Planning and Research), special districts, and members of the public who had requested such notice. The NOP was published on September 23, 2023, and the recirculated NOP was published on October 25, 2023.

The City also held a public scoping meeting on November 15, 2023, at 6:00 p.m., at City Hall. The purpose of the scoping meeting was to obtain comments from the public and agencies regarding the scope of this SEIR. A total of nine comment letters were received in response to the NOP.

The recirculated NOP and comment letters received during the recirculated NOP comment period, and a summary of issues raised during the public scoping meeting are included in Appendix B, Recirculated Notice of Preparation and Scoping Comments.

Comments raised identified during the scoping meeting include the following:

- Impacts to existing infrastructure and service systems
- Tribal consultation requirements pursuant to Assembly Bill 52 and Senate Bill 18
- Reduction of potential greenhouse gas emissions
- Analysis of cumulative impacts
- Public transit in cooperation with Riverside Transit Agency
- Sustainable building design

In addition to required CEQA consultation through the recirculated NOP scoping process, the City and applicant have engaged in stakeholder consultation and Senate Bill (SB) 18/Assembly Bill (AB) 52 tribal consultation. This stakeholder outreach also included focused consultation with key parties from which the applicant may require permits or approvals, including but not limited to the following:

- Eastern Municipal Water District
- Moreno Valley Unified School District
- Moreno Valley Fire Department
- Moreno Valley Police Department
- AB 52/SB 18 tribal consultation

The results of the Project's cultural resources studies, along with the information received through the AB 52/SB 18 tribal consultation process, is discussed in Section 4.18, Tribal Cultural Resources. The results of discussions with Moreno Valley Unified School District, Moreno Valley Fire Department, and Moreno Valley Police Department are further described in Section 4.15, Public Services. The results of discussions with Eastern Municipal Water District are further discussed in Section 4.19, Utilities and Service Systems.

1.5 Organization and Format of the SEIR

A brief overview of the various chapters and scope of the Draft SEIR are provided below.

Executive Summary. This chapter provides a summary of the SEIR, a brief description of the Project, Project objectives, summary of effects found not to be significant, summary of environmental impacts and mitigation measures, a summary of alternatives to the proposed Project, and areas of known controversy. It also includes a

table that summarizes the results of the environmental analysis and proposed mitigation measures to reduce or avoid significant impacts.

Chapter 1, Introduction. This chapter contains an overview of the legal authority, purpose, and intended uses of the SEIR, as well as its scope and content. It also provides a discussion of the CEQA environmental review process, including public involvement.

Chapter 2, Environmental Setting. This chapter provides a history of the developmental and regulatory framework relevant to the Project and a description of the current land uses and environmental conditions at the Project site.

Chapter 3, Project Description. This chapter provides a description of the Project, including the location, project history and CEQA background, objectives, characteristics, phasing, and anticipated permits and approvals that may be required for the Project.

Chapter 4, Environmental Impact Analysis. This chapter provides an evaluation of potential environmental impacts associated with the Project for environmental issues determined through the initial review and public scoping processes to be potentially significant. The analysis of each issue begins with a description of the current environmental setting and relevant regulatory framework and a statement of specific significance criteria or thresholds used to determine the significance of impacts. This is followed by an evaluation of potential impacts. If significant impacts are identified, feasible mitigation measures to avoid or reduce significant impacts are identified. Where mitigation measures are required, a statement regarding the significance of the impact after mitigation is provided. The City has determined that the project has the potential to result in significant environmental impacts on the following resources, which are addressed in this chapter:

4.1 Aesthetics and Visual Resources
4.2 Agricultural and Forestry Resources
4.3 Air Quality
4.4 Biological Resources
4.5 Cultural Resources
4.6 Energy
4.7 Geology and Soils
4.8 Greenhouse Gas Emissions
4.9 Hazards and Hazardous Materials
4.10 Hydrology and Water Quality
4.11 Land Use and Planning
4.12 Mineral Resources
4.13 Noise
4.14 Population and Housing
4.15 Public Services
4.16 Recreation
4.17 Transportation
4.18 Tribal Cultural Resources
4.19 Utilities and Service Systems
4.20 Wildfire

Appendices include the supporting technical reports, studies, and other documents; the appendices are an integral part of the SEIR. The list of the SEIR appendices is included in the Table of Contents to this SEIR. The City encourages review of both the SEIR and the appendices.

Chapter 5, Cumulative Impacts. This chapter provides the methodology for analyzing cumulative impacts. Per CEQA Guidelines Section 15065(a)(3), a project's impacts are "cumulatively considerable" when the incremental effects of an individual project are significant when viewed in connection with the effect of past projects, other current projects, and probable future projects. This chapter provides a description of the approach to analysis of cumulative effects to the environment as a result of the Project. The chapter includes a list of cumulative projects that are considered in the analysis and an individual analysis of potential cumulative impacts associated with each environmental resource category analyzed in the SEIR.

Chapter 6, Other CEQA Considerations. This chapter provides a discussion of growth inducement, effects found not to be significant, and significant unavoidable impacts. Growth inducement is the potential for a proposed project to effect economic or population growth, either directly or indirectly. Effects found not to be significant identifies the issues determined in the initial scoping and environmental review process to be not significant for the Project and briefly summarizes the basis for these determinations. Significant unavoidable impacts are those that are significant and cannot be reduced below a significant level with implementation of the recommended mitigation.

Chapter 7, Alternatives. This chapter provides a description and comparative analysis of alternatives to the proposed Project, including alternatives considered but rejected from further consideration, the No Project Alternative, and various other Project alternatives. This section also identifies the Environmentally Superior Alternative, as required by CEQA.

Chapter 8, References Cited and List of Preparers. This chapter identifies the City staff and EIR preparation team and identifies the reports, studies, supporting documents, websites, and other documents consulted in preparation of the Draft SEIR and where such documents may be viewed or referenced.

1.6 Responsible and Trustee Agencies

The lead agency, as defined by CEQA, is the public agency that has the primary responsibility of carrying out or approving the project (CEQA Guidelines Section 15367). Because the City has the primary discretionary authority to approve the proposed Project, it is the lead agency.

A responsible agency under CEQA is a public agency with some discretionary authority over a project or a portion of it, but which has not been designated the lead agency (CEQA Guidelines Section 15381). For the Project, the State Water Resources Control Coard and/or Regional Water Quality Control Board would be a responsible agency. There may be other responsible agencies subject to the applicant's subsequent approvals and permits.

A trustee agency is a state agency having jurisdiction by law over natural resources that are held in trust for the people of California, and which may be affected by a project (CEQA Guidelines Section 15386). A trustee agency may also be a responsible agency if it has discretionary authority over a project. There are no trustee agencies for the Project.

1.7 Incorporation by Reference

As described in CEQA Guidelines Section 15150, an EIR may incorporate by reference all or portions of another document that is available to the public. Where all or part of another document is incorporated by reference, the incorporated language shall be considered to be part of the text of the EIR. The following documents are incorporated by this reference:

- Moreno Valley Field Station Specific Plan (SP 218), February 1999
- Final EIR for the Moreno Valley Field Station Specific Plan (State Clearinghouse Schedule No. 93113076), February 1999
- Moreno Valley Field Station Specific Plan Final Supplemental EIR (State Clearinghouse Schedule No. 1993112076), May 2003
- Aquabella Specific Plan Amendment, December 2005
- Aquabella Specific Plan Amendment EIR Addendum, December 2005
- City of Moreno Valley General Plan 2040 (Adopted June 15, 2021)
- Final EIR for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan, June 2021 (State Clearinghouse Schedule No. 2020039022)
- City of Moreno Valley 2006 General Plan (Adopted July 11, 2006)
- Final EIR for the 2006 General Plan, July 2006 (State Clearinghouse Schedule No. 200091075)
- City of Moreno Valley Municipal Code

These documents are available to the public for inspection and review at the City of Moreno Valley Community Development Department, 14177 Frederick Street, City of Moreno Valley.

Where portions of the documents are relevant to the analysis in this Draft SEIR, the incorporated documents are briefly summarized.

Moreno Valley Field Station Specific Plan (SP 218), February 1999. The original SP 218 set forth a plan to develop approximately 710 acres, including the Project site. The original SP 218 envisioned development of 2,922 single-family and multifamily homes, a 148.7-acre golf course, 51 acres of parks, 24 acres of retail/commercial, and 80 acres of school and recreational areas, including a high school, middle school, two elementary schools, ball fields, and active play areas. Other proposed improvements covered traffic circulation, flood control, and water and sewer services. Further information about the original SP 218 can be viewed or obtained at the City of Moreno Valley Community Development Department.

Final EIR for the Moreno Valley Field Station Specific Plan (State Clearinghouse Schedule No. 93113076), completed October 1998, certified February 1999. The 1999 EIR (SCH No. 93113076) evaluated the impacts of a mixed-use residential, retail/commercial, school, and recreational development in the Specific Plan Area. This EIR is a publicly available document upon request to the City, and further information about the 1999 EIR can be viewed or obtained at the City of Moreno Valley Community Development Department.

Moreno Valley Field Station Specific Plan Final Supplemental EIR (State Clearinghouse Schedule No. 1993112076), May 2003. The City completed and certified a Supplemental EIR in 2003. The 2003 Supplemental EIR further evaluated traffic and biota impacts associated with the original SP 218. The 2003 Supplemental EIR is

a publicly available document upon request to the City, and further information about the 2003 Supplemental EIR can be viewed or obtained at the City of Moreno Valley Community Development Department.

Aquabella Specific Plan Amendment, December 2005. The 2005 Aquabella SPA proposed modifications to the original SP 218. Under this amendment, 2,702 of the 2,922 homes would be age-restricted in response to then market demand. The commercial area was slightly increased from approximately 24 acres to 25 acres. School sites were eliminated, except the 50-acre high school site, which was sold to the Moreno Valley Unified School District for construction of the now existing and operational Vista del Lago High School campus. In lieu of a golf course, 40 acres of lakes, clubhouse facilities, a 300-room hotel facility, trail and bicycle paths, and other amenities were approved. The 2005 Aquabella SPA also addressed circulation, drainage, open space, and other infrastructure and facility improvements. The 2005 Aquabella SPA is a publicly available document upon request to the City, and further information about the 2005 Aquabella SPA can be viewed or obtained at the City of Moreno Valley Community Development Department.

Moreno Valley Field Station Specific Plan Amendment EIR Addendum, December 2005. The 2005 Addendum evaluated the environmental effects arising from the 2005 Aquabella SPA and identified features, conditions, and/or mitigation measures to reduce impacts related to the 2005 Aquabella SPA. This document is also publicly available upon request to the City, and further information about the 2005 Addendum can be viewed or obtained at the City of Moreno Valley Community Development Department.

City of Moreno Valley General Plan 2040. The City of Moreno Valley has a General Plan Update (2040 General Plan) that provides a vision for the future of Moreno Valley over the next 20 years. The 2040 General Plan sets goals, policies, and actions to fulfill the vision and provide a framework for development and future growth. The 2040 General Plan ultimately reflects the aspirations of the community to cultivate a family-friendly city with a modern brand and unique sense of place. As part of its General Plan, the City includes the following elements: Land Use and Community Character, Economic Development, Circulation, Parks and Public Services, Safety, Noise, Environmental Justice, Healthy Community, Open Space and Resource Considerations, and Housing. The General Plan was referenced throughout this Draft SEIR since it contains policies and regulations relevant to the proposed Project.[2] This document can be viewed at the City of Moreno Valley Community Development Department and is additionally available for review at:

moval.org/cdd/documents/general-plan-update/draft-docs/MV-GP-PublicReview.pdf

[2] The 2040 General Plan Update was effective immediately upon adoption in June 2021. However, an environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (*Sierra Club v. City of Moreno Valley, et al*., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

EIR for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan (State Clearinghouse Schedule No. 2020039022) (2040 General Plan EIR). The 2040 General Plan EIR contains a program analysis of the environmental impacts associated with implementation of goals, policies, actions, and projected buildout of the 2040 General Plan, the associated Housing Element Update, and the associated Climate Action Plan. Additionally, the 2040 General Plan EIR contains mitigation measures to minimize significant project impacts and explores reasonable alternatives to the project.

This document can be viewed or obtained at the City of Moreno Valley Community Development Department and is additionally available for review at:

moval.org/cdd/documents/general-plan-update/final-docs/Moval 2040_Final EIR_with RTCs.pdf

The 2040 General Plan EIR was consulted for background information. This SEIR does not rely on or tier from the 2040 General Plan EIR's analysis.

City of Moreno Valley 2006 General Plan. The City of Moreno Valley 2006 General Plan provided a vision for the future of Moreno Valley at the time of its adoption in 2006. The 2006 General Plan is a broad policy document that identifies the City's land use, circulation, environmental, economic and social goals and policies as they relate to land use and development and thereby provide guidance to citizens, landowners, developers, and decision makers for development activity. As part of the 2006 General Plan, the City included the following elements: Community Development; Economic Development; Parks, Recreation and Open Spaces; Circulation; Safety; Conservation; and Housing. This document can be viewed or obtained at the City of Moreno Valley Community Development Department and is additionally available for review at:

https://www.moval.org/city_hall/general_plan.shtml

Final EIR for the 2006 General Plan (State Clearinghouse Schedule No. 200091075). The Final EIR for the City of Moreno Valley 2006 General Plan contains a thorough program analysis of the environmental impacts associated with implementation of goals, policies, actions and projected buildout of the 2006 General Plan. Additionally, the 2006 General Plan Final EIR contains mitigation measures to minimize significant project impacts and explores reasonable alternatives. This document can be viewed or obtained at the City of Moreno Valley Community Development Department and is additionally available for review at:

https://www.moval.org/city_hall/general_plan.shtml

Moreno Valley Municipal Code. The Moreno Valley Municipal Code establishes detailed zoning districts and regulations based on the General Plan. The Moreno Valley Zoning Code (Title 9: Planning and Zoning) serves as the primary implementation tool for the General Plan. The Moreno Valley Municipal Code can be accessed online at:

https://library.qcode.us/lib/moreno_valley_ca/pub/municipal_code

1A Executive Summary

1A.1 Introduction

The Aquabella Specific Plan Amendment Project (Amendment 2) (Project) provides plans and a new vision to guide the continued implementation of the Project site and bring significant public benefits, housing, and economic benefits to the City of Moreno Valley (City) and the region. The Specific Plan Amendment contains the updated land use and other plans, site development standards, design guidelines, and implementation measures necessary to implement the new vision for the Aquabella residential and mixed-use planned community.

1A.2 Project Overview

The previously approved Specific Plan Area encompassed 770.2 acres. Since that time, portions of the previously approved Specific Plan have been developed (e.g., Nason Street, Vista del Lago High School, apartment units). As such, the Aquabella Specific Plan Amendment (included as Appendix A to this SEIR) updates the vision for development of the remaining 658.6-acre site, plus an additional 10-acre parcel that would be added to the Specific Plan, for a total area of approximately 668.6 acres.

The Project would continue to implement Aquabella, which represents the geographic "center" of the City and a hub for western Riverside County. Reimagined, the developable portions of the Project site, comprised of approximately 668.6 acres, would encompass 15,000 multifamily and workforce housing options for all ages and income levels; a 49,900-square-foot mixed-use commercial and retail Town Center with a 300-room hotel; approximately 80 acres of parks, composed of a 40-acre lake system, a 15-acre lake promenade encircling the lake, and an additional 25 acres of parkland; approximately 40 acres of schools with up to three elementary school sites and one middle school site; public services and facilities; infrastructure improvements; and other amenities. Under prior approvals, the site's primary circulation roads (Nason Street and Cactus Avenue), master drainage, and master flood control improvements already have been completed, along with development of the 50-acre high school (Vista del Lago High School) and a 220-unit apartment complex.

The Project, while implementing a new vision, maintains many of the site's previously approved features, including the lakes, the lake promenade, parks, trails, and commercial/retail uses, including a 300-room hotel. The Project's primary land use changes consist of the creation of an innovative urban village and town center with 15,000 multifamily housing options for all ages and income levels, in lieu of the former, approved gated active-adult community of a total of 2,922 detached and attached units, of which 2,702 units were age-restricted. The Project also reflects that an additional 10-acre area would be added to the Project site along the eastern boundary of the Project site.

The Aquabella Specific Plan Amendment would be adopted pursuant to Government Code Sections 65450-65457, which grants authority to a city to adopt and amend a specific plan for purposes of implementing the goals and policies of its General Plan. The Government Code sets forth the minimum requirements and review procedures for a specific plan. The Specific Plan Amendment also complies with the City's Municipal Code (Chapter 9.13) governing the content of specific plans and procedures for their adoption and enforcement. Other discretionary actions requested for approval include a General Plan Amendment, Change of Zone for the 10-acre parcel, Tentative Tract Map, and Development Agreement.

1A.2.1 Project Objectives

This statement of project objectives has been established for the Project. The overall project objective is to continue to implement the Aquabella project, as modified, as a vibrant planned community consistent with City General Plan goals and objectives. The 2006 General Plan identified eight "ultimate" goals, and through the City of Moreno Valley General Plan 2040 (2040 General Plan) (adopted, June 15, 2021), the City refreshed its vision and guiding principles to respond to new economic, technological, social, demographic, regional, and global challenges and opportunities that have arisen.[1] The following project objectives govern:

1. Create a residential and mixed-use planned community framework within the center of the City that contributes to a distinct downtown center core consistent with the General Plan.
2. Provide a broad mix of multifamily residential housing options for all ages and income levels within the center of the City to address the needs of the City's existing and future residents, including those employed by adjacent and proximate health care, education, and logistics fields, in order to reduce long commutes to other distant job centers, achieve a better jobs-to-housing balance, and facilitate housing and job growth in central Moreno Valley.
3. Focus new residential, mixed-use, and retail/commercial uses within the City's Downtown Center and provide inviting uses to build Moreno Valley's sense of place, promote visitor-serving uses (e.g., Town Center, hotel), and take advantage of the site's sustainable lakes, lake promenade, and other amenities.
4. Utilize currently undeveloped land situated within the center of the City to foster vibrant gathering places, diversify the local economy, and implement livable sustainable mixed-use neighborhoods where people can live, work, recreate, and shop.
5. Implement the delivery of efficient public facilities and services (e.g., schools, parks, trails, police/fire), support frequent and reliable transit service and other multimodal transportation measures, promote walking and biking, and reduce vehicle miles travelled by taking advantage of a site approximating the size and scale of the previously adopted Aquabella Specific Plan.
6. Focus on maintaining and enhancing an efficient transportation network within central Moreno Valley, including automobile travel, transit, pedestrian and bicycle routes, car/van pools, electric vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and shuttles to adjacent and proximate major job centers (e.g., Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, and the World Logistics Center).

[1] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (*Sierra Club v. City of Moreno Valley, et al*., Riverside County Superior Court No. CVRI2103300)..
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

7. Maintain and strengthen the quality of life in central Moreno Valley with quality schools, parks, multi-use trails, responsive public services, and reliable utility infrastructure.
8. Assist the City in meeting and exceeding its local and regional housing needs.

1A.2.2 Project Location

The Project site is located in the southeastern portion of the City of Moreno Valley, a city of 208,289 residents (2023), in the western portion of Riverside County within the southern Inland Empire region (see Figure 3-1, Regional Location Map). The Project site is irregularly shaped and located east of Interstate (I) 215, south of State Route (SR) 60, and north of Lake Perris. The Project site is composed of approximately 668.6 acres across relatively flat land and is bounded by Cactus Avenue and Brodiaea Avenue to the north, Iris Avenue to the south, Laselle Street to the west, and Oliver Street to the east (see Figure 3-2, Project Site). The Project site is in Sections 15, 16, 21, and 22 of Township 3 South, Range 3 West on the U.S. Geological Survey Sunnymead 7.5 Minute Quadrangle.

1A.2.3 Project Summary

Proposed Project

Specific Plan Amendment

The Aquabella Specific Plan Amendment (Amendment 2) is designed to refresh the land use plan, goals, objectives, development standards, and design guidelines from those described and depicted in the previously approved 2005 Aquabella SPA. Table 1A-1 describes the land use and development details for the previously approved Specific Plan compared to the Project.

Table 1A-1. Specific Plan Land Use Statistical Summary

Land Use	Approved 1999 Field Station Specific Plan/ EIR			Approved 2005 Aquabella Specific Plan Amendment/Addendum			Proposed 2023 Aquabella Specific Plan Amendment /SEIR		
	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms
Residential									
Planning Area 1	449	2,922		622	2,922		39.8	2,000	
Planning Area 2							418.1	12,000	
Planning Area 3							116.3	5,500	
Planning Area 4							85.3	3,800	
Planning Area 5							9.1	100	
Subtotal:	*449*	*2,922*		*622*	*2,922*		*673*	*15,000 maximum*	
Land Use Overlay (1)									
Lake (open space & parkland)				40*			40*		
Park & Lake Promenade	51						40*		
Schools (Vista del Lago High School & up to 3 new locations)	80						40*		
Town Center/Commercial	24		300,000	(PA-B) 25		300,000/300	25*		49,900/ 300
Golf Course	148.7								
Circulation, RCFCD Channel	7.3			23			30*		
Subtotal:	*311*		*300,000*	*48*		*300,000 / 300*			*49,900/ 300*
Total:	**760**	**2,922**	**300,000**	**760**	**2,922**	**300,000 / 300**	**668**	**15,000 maximum**	**49,900/ 300**

Table 1A-1. Specific Plan Land Use Statistical Summary

Land Use	Approved 1999 Field Station Specific Plan/ EIR			Approved 2005 Aquabella Specific Plan Amendment/Addendum			Proposed 2023 Aquabella Specific Plan Amendment /SEIR		
	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms
Built and Operating Facilities (Acres not included in proposed Planning Areas 1-5)									
RCFCD Channel				16			12		
Planning Area 2 (Villa Annette Apartments of 2005 Plan)							13		
Land Donation to RUHS (Portion of 2005 Plan PA 1)							24		
Existing Vista del Lago High School (PA-A)				50			50		
Circulation (Nason, Cactus, Delphinium & Laselle St.)				24			Included in PAs 1-5 plus 3-acre ROW in Broadiea Ave & Cactus Ave		
Grand Total:	760			760			770 (2)		

Notes:

* Acres included in Planning Area

1 Floating land use designations are intended to indicate a general area within which schools, parks, and the town center/hotel could be located.

2 Increase of acreage between 2005 and 2023 Specific Plan Amendments due to addition of area at John F. Kennedy Drive and Oliver Street

The central elements of the Aquabella Specific Plan Amendment (Appendix A) include the redesignation of land for the development of up to 15,000 multifamily and workforce housing dwelling units for all ages and income levels (in lieu of a gated active-adult community with a maximum of 2,922 residential dwelling units); 49,900 square feet of mixed-use commercial and retail Town Center and the 300-room hotel; approximately 80 acres of parks (the previously approved 40-acre lake, a 15-acre lake promenade, and an additional 25 acres of parks); and approximately 40 acres designated for school use with up to three elementary school sites and one middle school site.

The Aquabella Specific Plan Amendment (Appendix A) is presented in seven chapters. An outline and a summary of each chapter is described herein.

Chapter 1 - Introduction provides an overview of this Aquabella Specific Plan Amendment, including an outline of the collaborative vision for the Specific Plan design, a description of the purpose and legal authorization, a discussion of the relationship of the Specific Plan Amendment to the Moreno Valley General Plan and Municipal Code, and a summary of the City's CEQA compliance for the Specific Plan Amendment.

Chapter 2 - Project Description, Location and History provides the project description, prior project approval history, requested discretionary approvals, location and setting, objectives, and build-out and phasing.

Chapter 3 – Planning Framework/Land Use Plan provides the planning framework, including the land uses; and the mobility plan focusing on motorized and non-motorized transportation design and tools.

Chapter 4 – Infrastructure provides a planning framework for the public services, infrastructure, and other plans (focusing on phasing strategies and major infrastructure systems, including water, sewer, and drainage facilities).

Chapter 5 – Development Regulations provides the required development standards such as building setbacks, objective building criteria, vehicle parking requirements, walls and fence standards, lighting standards and loading and screening standards.

Chapter 6 – Design Guidelines includes the Specific Plan Amendment's physical design guidelines related to site configuration, the lakes, the lake promenade, parks, and building design.

Chapter 7 – Administration and Implementation provides the process for subsequent project approvals, funding and financing mechanisms, and implementation actions.

Chapter 8 contains the appendices. **Appendices 8.1** and **8.2** provide the analysis of the Specific Plan Amendment's consistency/inconsistency with the Moreno Valley General Plan. **Appendix 8.3** contains the Aquabella Implementation Ministerial Review Checklist.

Discretionary Actions

The Project would require approval of the following discretionary actions by the Moreno Valley City Council, which are submitted and processed concurrently:

1. **Specific Plan Amendment (SPA) (PEN 23-0109) –** The Aquabella Specific Plan Amendment (SPA) (Appendix A) would update and modify previous Specific Plan No. 218 to take advantage of the "center city" location, and to establish a prominent destination for area residents and workers to live and recreate within a vibrant hub for the City and region. The SPA is needed to provide additional housing opportunities for residents and

area workers and families seeking to take advantage of the site's location within central Moreno Valley, proximity to major job centers, efficient transportation network, sustainable lake features, and other amenities. The SPA would provide updated development standards and design guidelines for the further proposed development within the Project site, and add one approximately 10-acre parcel to the eastern boundary of the Project site.

2. General Plan Amendment (GPA) (PEN 23-0127) – A GPA would be required to (a) change the 2040 General Plan Land Use & Community Character Element Table LCC-1, Development Potential and Jobs Housing Balance, and related text to update projected housing and job numbers to include the Project; (b) change the 2040 General Plan Table LCC-3, Downtown Center Illustrative Development Program (Net New Development 2020-2040), to reflect the updated Downtown Center development program by including the Project; and (c) change 2040 General Plan Map LCC-4, General Plan Land Use, to reflect the land use designation change of the approximately 10-acre parcel on the eastern boundary of the Project site (Assessor's Parcel No. 486310014) from Residential (R5) District to Downtown Center (Aquabella Specific Plan).

   If the 2006 General Plan is operative at the time of approval, the Project would require a GPA to amend the 2006 General Plan Land Use Map, Figure 2-2 to accommodate the Project.
3. Change of Zone (CZ)(PEN 24-0041)– A proposed change of zone would rezone the approximately 10-acre parcel on the eastern boundary of the Project site from Residential 5 (R5) District to DC-SP (SP 218) in order to incorporate the parcel into the Project boundary and be subject to the zoning, design, and development requirements therein.
4. Subsequent Environmental Impact Report (SEIR) Certification (PEN 23-0111) – Certification of this SEIR prepared in conformance with CEQA to ensure that the incremental environmental impacts between the Project and the previous Specific Plan are analyzed and considered, and that all feasible and reasonable mitigation measures or alternatives are implemented to reduce the identified significant impacts. Overriding considerations will be considered by the City. The processing of the SEIR requires public notification, stakeholder input, and community participation throughout the SEIR preparation and review process.
5. Tentative Tract Map No. 38850 (PEN 23-0118) - The Tentative Tract Map would provide the subdivision plans for the Aquabella Specific Plan area for finance and conveyance purposes. The Tentative Tract Map will consolidate the existing ten (10) parcels and create an estimated twenty-six (26) new parcels.
6. Development Agreement (PEN 23-0119) - The Development Agreement would be a written agreement between the Project applicant and the City in order to specify the respective obligations of the parties.

1A.3 Subsequent EIR Process

The purpose of this SEIR is to review the existing conditions, analyze potential significant environmental impacts, and identify feasible mitigation measures or alternatives to reduce the Project's potentially significant effects compared to the previous analyses and approvals. This Draft SEIR has been prepared on behalf of the City as the lead agency for the Project. Under CEQA, the public agency with principal responsibility for carrying out or approving a proposed project is referred to as the "lead agency" (CEQA Guidelines Section 15367). The City has primary land use jurisdiction over development within the City, which includes the Project site.

The SEIR will be circulated for public review to provide the public, institutions, agencies, and other interested parties the opportunity to review and provide comment on the Draft SEIR. Once the public review period ends, the City will review and respond to all comments made on the Draft SEIR as appropriate in the Final SEIR. The Final SEIR will

be prepared and presented to the City decision makers to consider whether to certify the Final SEIR and approve the Project.

If the SEIR identifies significant unavoidable impacts, even with implementation of all feasible mitigation measures, the City decision makers may nonetheless determine to approve the Project. This determination requires the decision makers to balance the benefits of the Project to determine if they outweigh identified significant unavoidable impacts. If the benefits of the Project outweigh the significant unavoidable impacts, the impacts may be considered "acceptable," and the Project approved. The basis for the approval must be set forth in a Statement of Overriding Considerations required by CEQA.

1A.4 Areas of Controversy

A Notice of Preparation (NOP) was circulated, establishing a public scoping period that was held between September 29 and November 6, 2023, to solicit input on the scope of the analysis for the SEIR. The NOP was subsequently recirculated and the public scoping period was extended to November 27, 2023. Additionally, an in-person scoping meeting was held by the City of Moreno Valley on November 15, 2023. The purpose of this meeting was to seek input from public agencies and the public regarding potential Project environmental impacts. Approximately 12 people attended the scoping meeting and 9 written comments were received during the scoping period. Comment letters are included in Appendix B of this SEIR. The public comments and questions received at the scoping meeting, as well as in writing, generally pertained to the following topics:

- Impacts to existing infrastructure and service systems
- Tribal consultation requirements pursuant to Assembly Bill 52 and Senate Bill 18
- Reduction of potential greenhouse gas emissions
- Analysis of cumulative impacts
- Public transit in cooperation with Riverside Transit Agency (RTA)
- Sustainable building design

1A.5 Summary of Project Alternatives

This SEIR includes an evaluation of the following alternatives:

- Alternative 1: No Project – No Development (Zero Units/No Development)
- Alternative 2: Previously Approved Aquabella 2005 Specific Plan Amendment (2,702 Units)
- Alternative 3: 2040 General Plan Downtown Center (2,702 Units/1,804,000 sf of commercial/retail)
- Alternative 4: Reduced Density – 10,000 Units
- Alternative 5: Reduced Density – 7,500 Units
- Alternative 6: Increased Commercial
- Alternative 7: Increased Density – 20,000 Units

Alternative 1

Alternative 1: No Project - No Development is the a "No Project" alternative pursuant to CEQA Guidelines Section 15126.6(e). The Project site would retain its land use entitlements under the 2005 SPA Amendment but would

remain undeveloped under existing conditions and no physical development would occur. Under this alternative, development activities related to construction and operation of residential, commercial, recreational, and all other proposed onsite improvements would not occur. In the short term, the Project site would remain vacant and not developed. Maintenance activities, weed abatement, and management of the Line F riparian mitigation channel would continue to occur. Changing market conditions may prevent the Project site to be developed as currently entitled and may extend the current existing conditions into the future. While this alternative is similar to Alternative 2: Previously Approved Aquabella 2005 Specific Plan Amendment, the alternative considers the possibility that current land use entitlements do not match up with current market demands and preclude future development of the Project site. This alternative also does not require any action on the part of decision makers, but it represents a possible outcome of the use of the Project site. As such, Alternative 1: No Project - No Development was considered a viable alternative for analysis purposes. This alternative would not require a General Plan Amendment, Specific Plan Amendment, or any other City project approvals.

Alternative 2

Alternative 2: Previously Approved Aquabella 2005 Specific Plan Amendment Alternative is also a "No Project" alternative pursuant to Section 15126.6(e) of the CEQA Guidelines and examines the environmental effects that would occur if development occurred under the previously approved 2005 Aquabella SPA. Under this alternative, build out of the remainder of the Aquabella Specific Plan area would occur as currently approved. This would include the development of up to approximately 2,922 single-family and multifamily homes with approximately 2,702 age-restricted dwelling units as part of a gated, active-adult community (55 years of age and older). It would also include 25 acres of commercial development, 40 acres of lakes, clubhouse facilities, a potential 300-room hotel facility, trail and bicycle paths, and other amenities. The 2005 Aquabella SPA included the realignment and widening of Nason Street, which has been completed. As stated, the 2005 Aquabella SPA also included 220 non-age restricted units, which have been completed. Further, approximately 16.3 acres of open space/drainage channel facilities and 50.6 acres of circulation corridors would continue to be implemented.

Compared to the Project, this alternative would not require a General Plan Amendment, Change of Zone, or Specific Plan Amendment, nor further CEQA review, but may require additional mapping and/or plan review and approval.

Alternative 3

This alternative would consist of developing the Project site pursuant to its land use designation under the 2040 General Plan, which is designated as Downtown Center, as well as the abandonment of Previously Approved Aquabella Specific Plan Amendment. This development would consist of approximately 2,702 residential units, 808,000 square feet of commercial uses, 781,000 square feet of office space, and 215,000 square feet of retail. This alternative would not require a General Plan Amendment (provided the 2040 General Plan is in effect), but it would require a Specific Plan Amendment to increase the acreage of commercial land uses (previously 25 acres) to accommodate the substantially greater 1,804,000 square feet of commercial, office, and retail uses. It would also require tentative tract map or site plan approval by the City, as well as further CEQA review.

Alternative 4

Alternative 4: Reduced Density - 10,000 Units would include development at a reduced density when compared to the current Project, with all other project features remaining the same. Specifically, Alternative 4 would include the development of approximately 10,000 residential units, which would result in an overall density of approximately 15 dwelling units/acre. The design of the proposed land use plan would remain the same, and the approximate

location and density of other uses, including commercial, retail, and public facilities would remain the same as the Project. Additionally, 80 acres of parks, including 40 acres of lakes, would be developed. This would still include 25 acres of commercial uses. The proposed circulation system would remain consistent with the Project's proposed roadways and bikeways.

Alternative 5

Alternative 5: Reduced Density – 7,500 Units would develop the Project site with 7,500 residential units, 25 acres of commercial uses, a 40-acre lake complex, 40 acres of parks, open space, and recreation, and 40 acres of schools. Alternative 5 would result in a reduced total number of residents and jobs (related to building maintenance, landscaping, schools, and other indirectly related employment opportunities) compared to the current Project.

Alternative 6

Alternative 6 would develop the Project with additional commercial development up to 150,000 square feet of commercial/retail space. (See Sierra Club letter during the public scoping period.) The comment from Sierra Club suggested that the Project should have more commercial options available within walking distance for the residents of the Project to reduce vehicle trips. The Project would remain the same in all other respects. Thus, this alternative would develop 15,000 residential multi-family units, 40-acre lake complex, 40 acres of parks, open space, and recreation, and approximately 40 acres of schools. The organization and density of land uses for Alternative 6 would differ compared to the Project in order to accommodate 150,000 square feet of commercial land uses within the 668.8-acre undeveloped portion of the Project site.

Alternative 7

This alternative would allow for the development of up to 20,000 workforce residential units. Alternative 7 would also include the development of 49,900 square feet of commercial, approximately 80 acres of recreational facilities including a 40-acre lake complex, a 40-acre lake promenade, approximately 40 acres of schools, and 25 acres of commercial, like the current Project.

1A.5.1 Environmentally Superior Alternative

Table 1A-1 provides a comparison of the potential impacts of the project alternatives by indicating for each environmental issue area if the Alternative would result in a similar, increased, slightly reduced, or reduced impact. Table 1A.1 also provides a comparison to the potential impacts resulting from the proposed project.

Table 7-1. Comparison of the Environmental Impacts of Alternatives

Environmental Topic	Project	Alternative 1[1]	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7
Air Quality	Significant and Unavoidable (Project and Cumulative)	Reduced	Slightly reduced (Still Significant and unavoidable)	Similar	Reduced (Still Significant and Unavoidable)	Slightly reduced (Still Significant and unavoidable)	Greater	Greater
Biological Resources	Less Than Significant with Mitigation	Reduced	Similar	Similar	Similar	Similar	Similar	Similar
Cultural, Paleontological, and Tribal Cultural Resources	Less Than Significant with Mitigation	Reduced	Reduced	Similar	Similar	Similar	Similar	Similar
Greenhouse Gas Emissions	Less Than Significant with Mitigation	Reduced	Reduced	Similar	Slightly Reduced	Slightly Reduced	Similar	Similar
Hazards and Hazardous Materials	Less Than Significant with Mitigation	Reduced	Similar	Slightly reduced	Similar	Similar	Similar	Similar
Hydrology and Water Quality	Less Than Significant with Mitigation	Reduced	Similar	Reduced	Similar	Similar	Similar	Similar
Noise	Less Than Significant with Mitigation	Reduced	Similar	Similar	Reduced	Reduced	Similar	Similar

Section 15126.6 of the CEQA Guidelines states that an EIR must identify the "environmentally superior" alternative. "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Based on the above analysis and the summary of impacts presented in Table 7.1, the environmentally superior alternative would be Alternative 1: No Project - No Development, because this alternative would consist of no physical development of the Project site and reduce the level of impacts for all environmental impacts that are either less than significant with mitigation or significant and unavoidable with implementation of the Project. However, Alternative 1 is the CEQA "No Project" alternative, and therefore, the environmentally superior alternative is Alternative 5: Reduced Density, Alternative 2 (7,500 Units).

1A.6 Summary of Environmental Impacts and Mitigation Measures

Table 1A-2 provides the list of all Project Design Features (PDFs) incorporated into the Aquabella Specific Plan Amendment and the design of the Project in order to minimize potential environmental effects of the Project. To ensure enforcement, the PDFs will be included in the Project's Mitigation Monitoring and Reporting Plan (MMRP). Table 1A-3 summarizes the results of the environmental analysis, including the potentially significant environmental impacts of the Project, the proposed mitigation measures required to reduce or avoid these impacts, and the level of significance after mitigation. Each adopted mitigation measure also will be included in the Project's MMRP to ensure enforcement. Impacts and mitigation measures in Table 1A-3 are organized by issue areas addressed in Chapter 4, Environmental Analysis. Chapter 5, Cumulative Impacts, includes an analysis of the cumulative impacts of the Project for each issue. Chapter 6, Other CEQA Considerations, includes a brief analysis of the effects found not to be significant.

Table 1A-2. Project Design Features

Air Quality	
PDF-AQ/GHG-1:	**Electric Vehicle Charging Infrastructure.** The Project applicant or designee shall provide electric vehicle (EV) charging infrastructure that meets or exceeds 2022 California Green Building Standards Code Tier 2 standards to encourage use of EVs, consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan. The Project provides a total of 23,772 parking spaces. Of that amount, the Project shall install (a) 9,509 (or 40%) Level 2 240-volt (v) electric vehicle receptacles in Project parking structures and (b) 3,566 (or 15%) Level 2 240 v electric vehicle supply equipment (or stations) in Project parking lots or remaining garages.
PDF-AQ/GHG-2:	**No Wood-Burning Fireplaces or Stoves and No Natural Gas Fireplaces.** The Project applicant or designee shall install only electric fireplaces in residential units. Project residential units are prohibited from having wood-burning or natural gas fireplaces or wood-burning stoves.
PDF-AQ/GHG-3:	**Require All-Electric Development.** All Project-related residential and non-residential development shall use all-electric appliances and end uses (including heating, ventilation, and air conditioning; water heating; and induction cooking) with the exception of restaurant land uses within the retail/food and beverage space (estimated at approximately 14,970 square feet of the Project's Town Center use of 49,900 square feet of commercial/retail use and 300,000 square feet of hotel use, totaling 349,900 square feet). Swimming pool and spa equipment and water heating shall also use electricity or solar instead of natural gas. (This PDF is largely consistent with Appendix D,

Table 1A-2. Project Design Features

<table>
<tr><td></td><td>Table 3, of the 2022 CARB Scoping Plan Update, which recommends all-electric appliance uses without any natural gas connections or any propane or other fossil fuels for space heating, water heating, or indoor cooking.)</td></tr>
<tr><td>PDF-AQ/GHG-4:</td><td>Provision of Rooftop Solar. The Project applicant or designee shall provide rooftop photovoltaic (PV) solar panels on all residential and non-residential buildings in accordance with the requirements of the version of Title 24, Part 6, of the California Building Standards Code and California Green Building Standards Code in effect at the time of building permit application to provide an on-site source of renewable energy. The swimming pools' and spas' heating demand shall be served by a minimum of 50% solar water heating.
The following table identifies the building type, size, PV generation per square foot, and the annual solar production (kilowatt-hours).

<table>
<tr><th>Building Type</th><th>Building Size</th><th>PV Generation per Square Foot (kWh/sf/year)</th><th>Annual Solar Production (kWh)</th></tr>
<tr><td>Multifamily low-rise</td><td>6,750,000</td><td>3.16</td><td>21,330,000</td></tr>
<tr><td>Multifamily midrise</td><td>6,750,000</td><td>3.79</td><td>25,582,500</td></tr>
<tr><td>Hotel</td><td>300,000</td><td>0.62</td><td>186,000</td></tr>
<tr><td>Elementary schools</td><td>192,000</td><td>3.03</td><td>581,760</td></tr>
<tr><td>Middle school</td><td>85,000</td><td>3.03</td><td>257,550</td></tr>
<tr><td>Restaurants</td><td>14,970</td><td>0.76</td><td>11,377</td></tr>
<tr><td>Retail</td><td>34,930</td><td>4.95</td><td>172,904</td></tr>
<tr><td></td><td></td><td>Total</td><td>48,122,091</td></tr>
</table>
Note: kWh/sf/year = kilowatt-hour per square foot per year; kWh = kilowatt-hour.</td></tr>
<tr><td>PDF-AQ/GHG-5:</td><td>LED Lighting. The Project applicant or designee shall install light-emitting diode (LED) outdoor lighting in public spaces at the Project site in compliance with dark skies design considerations and policies of the City of Moreno Valley General Plan 2040 and shall install LED lighting in all Project residential units at the time of construction.</td></tr>
<tr><td>PDF-AQ/GHG-6:</td><td>Energy Efficient Appliances.. The Project applicant or designee shall install ENERGY STAR-rated appliances for residential refrigerators, dishwashers, clothes washers, ceiling fans, and non-residential commercial refrigerators.</td></tr>
<tr><td>PDF-AQ/GHG-7:</td><td>Energy Smart Meters. The Project applicant or designee shall install real-time energy smart meters within all residential and non-residential development.</td></tr>
<tr><td>PDF-AQ/GHG-8:</td><td>Cool Pavements. The Project applicant or designee shall install cool pavements to reduce the potential for the urban heat island effect. Outdoor pavements, such as internal walkways and patios, shall use paving materials with three-year Solar Reflectance Index (SRI) of 0.28 or initial SRI of 0.33.</td></tr>
<tr><td>PDF-AQ/GHG-9:</td><td>Solid Waste Reduction. The Project applicant or designee shall implement a solid waste reduction strategy that includes, at a minimum, storage areas for recyclables and green waste in new construction and food waste storage (community composting zones). Solar-powered compacting trash and recycling containers shall be provided within the public areas of the Project site. The Project applicant or designee shall contract with a commercial solid waste company to provide, remove, and replace solid waste containers at all residential and commercial facilities.</td></tr>
</table>

Table 1A-2. Project Design Features

PDF-AQ/GHG-10:	**Establish a Local Farmer's Market.** The Project applicant or designee shall establish a local farmer's market for Project residents and surrounding area that provides local sources of food by the time or before Project development obtains certificate of occupancy for the 500th residential unit.
PDF-AQ/GHG-11:	**Tree Planting.** The Project applicant or designee shall include an urban and parkland tree planting program for carbon sequestration at a minimum of one tree per dwelling unit or a total of 30,000 trees planted at Project buildout. If a tree dies, the Project applicant or designee shall plant a new replacement tree as enforced through the covenants, conditions, and restrictions within 30 years of planting. Trees planted may include, but are not limited to, southern magnolia, California sycamore, American elm, slash pine, and white ash.
PDF-AQ/GHG-12:	**Water Use Efficiency and Conservation Plan**. The Project applicant or designee shall implement a Water Use Efficiency and Conservation Plan that includes the following minimum requirements: *Indoor Conservation Features and Operations:* ▪ **Install low-flow fixtures**: In the residential units, install low-flow toilets at 1.28 gallons per flush, faucets at 1.2 gallons per minute, showerheads at 1.8 gallons per minute, and kitchen faucets at 1.8 gallons per minute. In common areas, install faucets at 0.5 gallons per minute and urinals at max of 0.25 gallons per minute/flush. (These fixtures use less water while maintaining efficient performance.) ▪ **Install dual-flush toilets**: These toilets offer two flush options—one for liquid waste less than 1 gallons per minute and another for solid waste at 1.28 gallons per minute. (This allows the appropriate use of water for flushing needs.) ▪ **Use water-efficient appliances**: The Project applicant or designee shall install energy-efficient and water-saving appliances like dishwashers and washing machines with the ENERGY STAR label only. ▪ **Implement hot water recirculation system**: The Project applicant or designee shall implement a recirculation system for hot water systems to ensuring low to no wasted water while waiting for water to reach desired temperature. ▪ **Incorporate leak detection on each residential building.** Leak detection will be incorporated into residential structures to detect water leaks typical of residential uses such as irrigation and plumbing. ▪ **Capture and reuse heating, ventilation, and air conditioning condensation**: The Project applicant or designee shall direct condensation from air conditioning units to water plants or for other non-potable uses. ▪ **Implement good housekeeping and regular maintenance**: The Project applicant or designee shall regularly (daily, weekly, monthly, etc. as applicable) check and maintain plumbing fixtures, irrigation systems, and appliances to ensure they are functioning efficiently and not wasting water. *Outdoor Conservation Features and Operations:* ▪ **Install only "Smart Irrigation Systems" for community landscaping**: The Project applicant or designee shall utilize smart sprinkler systems that adjust watering schedules based on weather conditions, soil moisture, and plant needs to avoid overwatering or wasteful watering. The Project applicant or designee shall also incorporate seasonal specific controls to ensure watering occurs during the most efficient times of day. ▪ **Install adjustable water pressure regulator**: The Project applicant or designee shall install pressure regulators to maintain optimal water pressure, preventing overuse and leaks.

Table 1A-2. Project Design Features

	▪ **Incorporate leak detection into each master landscape meter complex.** Leak detection will be incorporated into residential structures to detect water leaks from landscaping. ▪ **Include drought-tolerant landscaping**: The Project applicant or designee shall include native and drought-tolerant vegetation that requires less water to thrive and is known to survive in the greater Moreno Valley area. The Project applicant or designee shall replace drought-tolerant landscaping if it dies through enforceable Project covenants, conditions, and restrictions (CC&Rs) for 30 years after initial planting. ▪ **Harvest and reuse rainwater and drainage water:** The Project's lake shall be part of a water retention and reuse program. ▪ **Use permeable pavement surfaces:** The Project applicant or designee shall use permeable materials in parking areas, internal walkways, and public areas. (These surfaces will allow water to infiltrate the ground rather than running off, reducing runoff and promoting groundwater recharge.) ▪ **Include community education and outreach:** The Project applicant or designee shall educate employers, employees, and residents about water conservation practices and encourage them to implement mindful water usage habits through enforceable Project CC&Rs. ▪ **Place educational signage:** The Project applicant or designee shall place informational signs and notices at appropriate locations on the Project site to encourage water-saving behaviors among residents and guests.
PDF-AQ/GHG-13:	**Use Recycled Water for Irrigation.** The Project applicant or designee shall use recycled water for irrigation areas including the school irrigated areas, Town Center irrigation, parks, parkways, and urban landscape.
PDF-AQ/GHG-14:	**Use of Local Well Water for Lake. The** Project applicant or designee shall use local well water as the primary source to meet the lake initial fill and refilling needs. A minimum of 200-acre feet per year of local water will be used for the lake at Project buildout.
PDF-AQ/GHG-15:	**Integrated Stormwater System.** The Project applicant or designee shall include an integrated stormwater, flood control and erosion control lake system with bio basins and native plant restoration areas that will increase groundwater percolation and downstream water quality.
Transportation	
PDF-TRANS-1:	**Community-Based Travel Planning.** The Project's residential uses shall implement community-based travel planning (CBTP). CBTP is a residential-based approach to outreach that provides households with customized information, incentives, and support to encourage the use of transportation alternatives in place of single occupancy vehicles, thereby reducing household vehicle miles traveled and associated greenhouse gas emissions. Implementation of this feature in the Project shall consist of teams of trained travel advisors visiting all households within the Project upon move-in and having tailored conversations about residents' travel needs and educating residents about the various transportation options available to them.
PDF-TRANS-2:	**Unbundle Residential Parking Costs from Property Costs.** The Project applicant or designee shall unbundle, or separate, a resident's parking costs from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost. On the assumption that parking costs are passed through to the vehicle owners/drivers utilizing the parking spaces, this feature results in decreased vehicle ownership and, therefore, a reduction in vehicle miles traveled and greenhouse gas emissions. Parking costs must be passed through to the vehicle owners/drivers utilizing the parking spaces for this feature to result in decreased vehicle ownership. Implementation of this feature

Table 1A-2. Project Design Features

	in the Project shall consist of parking spaces costing approximately $100–$150 as a separate monthly cost from the rental of a unit. (This required feature is consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends that "multifamily residential development … [require] parking costs to be unbundled from costs to rent or own a residential unit.")
PDF-TRANS-3:	**Commute Trip Reduction (CTR) Program Marketing.** The Project applicant or designee shall implement a marketing strategy to promote the Project site employer's CTR program. Information sharing and marketing shall promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing vehicle miles traveled and greenhouse gas emissions. Implementation of this measure will consist of: ▪ On-site or online commuter information services ▪ Employee transportation coordinators ▪ On-site or online transit pass sales ▪ Guaranteed ride home service
PDF-TRANS-4:	**Rideshare Program.** The Project applicant or designee shall implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Ridesharing encourages carpooled vehicle trips in place of single-occupied vehicle trips, thereby reducing the number of trips, vehicle miles traveled, and greenhouse gas emissions. Implementation of this measure in the Project will consist of employers promoting the following: ▪ Designating a certain percentage of desirable parking spaces for ridesharing vehicles ▪ Designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles ▪ Providing an app or website for coordinating rides
PDF-TRANS-5:	**End-of-Trip Bicycle Facilities.** The Project applicant or designee shall install and maintain end-of-trip bicycle facilities. Per CAPCOA's 2021 GHG Handbook, end-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing vehicle miles traveled and greenhouse gas emissions. Implementation of this required feature will be sized to encourage bicycling by providing facilities to accommodate 10%–20% of the forecasted 804 employees staffed daily on the Project site. Implementation of this feature shall also be regularly maintained by the Project applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4.
PDF-TRANS-6:	**Discounted Transit Program for Work Trips.** The Project applicant or designee shall provide subsidized, discounted, or free transit passes for employees through the permanent transportation management association referenced in PDF-TRANS-4. Per CAPCOA's 2021 GHG Handbook, reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced vehicle miles traveled and thus a reduction in greenhouse gas emissions. The Project design shall ensure accessibility either within 1 mile of high-quality transit service (rail or bus with headways of less than 15 minutes), 0.5 miles of local or less frequent transit service, or along a designated shuttle route providing last-mile connections to rail

Table 1A-2. Project Design Features

	service. With the availability of bikeshare service, the Project site may be located up to 2 miles from a high-quality transit service. Implementation of this feature in the Project shall be provided by the Project applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4. Transit service shall be expanded with implementation of the Project to the following: ▪ Bus Rapid Transit is proposed on Alessandro Boulevard that would provide high-quality transit service within 0.5 miles of the Project. ▪ Bus service will provide direct connections to the Moreno Valley/March Field Metrolink Train Station located approximately 5 miles west of the Project. ▪ Bikeshare will be available to support the discounted transit program, including a non-electric bike share program with a minimum of 150 bikes and an electric bike share program with a minimum of an additional 150 bikes..
PDF-TRANS-7:	**Non-Electric Bikeshare Program.** The Project applicant or designee shall establish a non-electric bikeshare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. The bikeshare program shall provide users with on-demand access to non-electric bikes for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to bicycles, displacing vehicle miles traveled and thus reducing greenhouse gas emissions. This program shall provide 25 electric bikes at certificate of occupancy of each 2,500th unit, and a minimum of 150 such bikes located within 0.5 miles of the Project's mobility hub to be maintained by the Project applicant or designee.
PDF-TRANS-8:	**Electric Scootershare Program.** The Project applicant or designee shall establish the scootershare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. Scootershare programs provide users with on-demand access to electric scooters for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to scooters, displacing vehicle miles traveled and thus reducing greenhouse gas emissions.
PDF-TRANS-9:	**Extend Transit Network Coverage.** The Project applicant or designee shall coordinate with the Riverside Transit Agency to update bus service routes and service times to serve the new community through the permanent transportation management association referenced in PDF-TRANS-4. This would extend transit network coverage to existing and future employment centers, such as the World Logistics Center. Additionally, this would include extending transit hours for all shift times, such as the midnight shift change at the World Logistics Center. Per CAPCOA's 2021 GHG Handbook, this feature includes expansion of the local transit network by either adding or modifying existing transit service or extending the operation hours to enhance the service near the Project site. Starting services earlier in the morning and/or extending services to late-night hours can accommodate the commuting times of alternative-shift workers. This encourages the use of transit and therefore reduces vehicle miles traveled and associated greenhouse gas emissions.
PDF-TRANS-10:	**Increase Transit Service Frequency.** The Project applicant or designee shall coordinate with the Riverside Transit Agency (RTA) to update bus service routes and service times to serve the new community. This will include working with RTA to establish Bus Rapid Transit on Alessandro Boulevard and providing direct bus connections to the Moreno Valley/March Field Metrolink Train Station. Per CAPCOA's 2021 GHG Handbook, increased transit frequency reduces waiting and overall travel times, which improves the user experience and increases the attractiveness of transit service. This results in a mode shift from single occupancy vehicles to transit, which reduces vehicle miles traveled and associated greenhouse gas emissions.

Table 1A-2. Project Design Features

PDF-TRANS-11:	**Implement Bus Rapid Transit (BRT).** The Project applicant or designee shall support the City of Moreno Valley and the Riverside Transit Agency plans for BRT along Alessandro Boulevard. Implementation of this feature would include improved travel times from transit signal prioritization, increased service frequency, and a full-featured BRT service operating on a fully segregated running way with a specialized vehicles, attractive stations, and efficient fare collection practices. Per CAPCOA's 2021 GHG Handbook, this feature will convert an existing bus route to a BRT system. BRT includes the following additional components, compared to traditional bus service: exclusive right-of-way (e.g., busways, queue jumping lanes) at congested intersections, increased limited-stop service (e.g., express service), intelligent transportation technology (e.g., transit signal priority, automatic vehicle location systems), advanced technology vehicles (e.g., articulated buses, low-floor buses), enhanced station design, efficient fare-payment smart cards or smartphone apps, branding of the system, and use of vehicle guidance systems. BRT can increase the transit mode share in a community due to improved travel times, service frequencies, and the unique components of the BRT system. This mode shift reduces vehicle miles traveled and the associated greenhouse gas emissions.
PDF-TRANS-12:	**Mobility Hub.** The Project applicant or designee shall develop a state-of-the-art Mobility Hub at or near the Project site to bolster the effectiveness of active transportation options (mobility hubs are places of connectivity that bring together multiple modes of travel and strengthen first-mile/last-mile connections to transit). Mobility hubs provide a centralized location for non-automotive transportation modes to connect users to their destinations. There are limited benefits to implementing a stand-alone mobility hub, as the facility is meant to promote and support alternative transportation modes. Mobility hubs should be supplemented with additional strategies or programs that provide increased public transit, bicycle, and pedestrian access and improvements. Implementation of the Mobility Hub shall require coordination with the Riverside Transit Agency, Metrolink, and the City of Moreno Valley. Though the proposed Mobility Hub is not included in CAPCOA's 2021 GHG Handbook, many of the characteristics of the Mobility Hub (increased transit accessibility, increased bicycling accessibility) are part of other transportation demand management (TDM) strategies outlined in CAPCOA. The Mobility Hub is anticipated to strengthen the effectiveness of other proposed TDM strategies. However, to provide a conservative approach to trip generation, additional reductions were not applied for the Mobility Hub in the vehicle miles traveled reduction calculated for the Project.
PDF-TRANS-13:	**Electric Bikeshare Program.** The Project applicant or designee shall establish an electric bikeshare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. The bikeshare program shall provide users with on-demand access to bikes for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to bicycles, displacing vehicle miles traveled and thus reducing greenhouse gas emissions. Like the non-electric bike program in PDF-TRANS-7, this program shall provide an additional 25 electric bikes at certificate of occupancy of each 2,500th unit, and a minimum of an additional 150 such bikes located within 0.5 miles of the Project's mobility hub to be maintained by the Project applicant or designee.
PDF-TRANS-14:	**Provide Shuttle Service to Employment Centers.** The Project applicant or designee shall provide shuttle service to existing and future employment centers, including the World Logistics Center. Such service shall be provided at the completion of the 2,500th unit, and be located within 0.5 miles of the Project's mobility hub.

Table 1A-2. Project Design Features

PDF-TRANS-15:	**Implement Market Price Public Parking.** The Project applicant or designee shall install parking meters or implement a residential parking permit program that prices all on-street public parking in the Project's Town Center at market rates. Pricing on-street parking helps incentivize shifts to alternative transportation modes, decreasing total vehicle miles traveled to and from the priced areas.
Land Use	
PDF-LU-1:	**Mixed-Use Project Design.** The Project design shall integrate a mix of residential, commercial, retail, entertainment, employment, educational, and recreational uses that capture and reduce vehicular trips and associated environmental impacts, including greenhouse gas emission reductions. The Project also shall include reduced parking requirements in its regulatory Specific Plan as a vehicle miles traveled (VMT) reduction tool, consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends reduced parking requirements to reduce VMT.
PDF-LU-2:	**Provision of Urban Core.** The Project shall create an urban core that provides a wide array of residential units, including workforce housing, oriented toward the adjacent, existing regional medical centers, the community college, and other nearby job centers to further reduce vehicle trips and associated environmental impacts
PDF-LU-3:	**Short Walkable Blocks.** The Project design shall be composed of short, walkable blocks of up to 600 feet in length.
PDF-LU-4:	**Increased Residential Density.** The Project shall increase residential density, leading to shorter vehicle trips and fewer single-occupancy vehicle trips than surrounding lower-density developments. The increase in residential density in this infill Project site surrounded by existing urban uses and served by existing utilities and essential public services (e.g., transit, streets, water, and sewer) reduces vehicle miles traveled (VMT). The residential increase is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends locating residential and mixed-use development projects on infill sites surrounded by urban uses, existing utilities, and essential public services as a means of reducing VMT. The increase in residential density is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends transit-supportive densities at a minimum of 20 residential dwelling units per acre to reduce VMT. The Project site is in proximity to existing transit options, which is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update.
PDF-LU-5:	**Walkable/Bikeable Community.** The Project site is located in an area with average vehicle miles traveled below that of the City of Moreno Valley and the region. The Project design shall, and does, provide a walkable and bikeable community proximate to major area job centers, including World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, University of California Riverside, Moreno Valley College, and regional and local shopping and commercial centers, which would allow residents to live and work locally, cutting commute times, reducing vehicle trips, reducing greenhouse gas emissions, and improving air quality. An efficient transportation network is a central tenet of the Project, which will provide a tram connection to job centers, enhanced transit, pedestrian and bicycle routes, ridesharing, non-electric bikes, electric bikes, electric scooters, a mobility hub, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures.
PDF-LU-6:	**Transit Benefits.** The Project site is located along major transit routes, and the Project applicant or designee shall support frequent and reliable transit service and other multi-modal transportation measures, including walking and biking. The Riverside Transit Agency (RTA) provides existing bus routes proximate to the site. Route 31 runs along

Table 1A-2. Project Design Features

	Nason Street to the Riverside University Medical Center. Route 20 also serves the site along Alessandro, Nason, and Moreno Beach Dr. to the Riverside University Medical Center, Kaiser Permanente Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across Interstate 215. The Project applicant or designee shall coordinate with the RTA with respect to transit service and other multi-modal transportation options related to the Project to reduce vehicle miles traveled.
PDF-LU-7:	**Integrated Design.** The Project plans shall include an integrated, connected town center neighborhood intended to maximize walkability, bike-ability, and transit use as part of an efficient transportation network in the City of Moreno Valley. The Project incorporates transit, pedestrian, and bicycle routes and other multi-modal transportation programs and technologies to move residents efficiently to and from major job centers and reduce the need for on-site parking. Extensive parks, trails, the lake promenade and open space features, sidewalks, internal walkways, and roadways on site shall be required to encourage biking and walking. Trees and landscaping shall be used throughout the Project site, along streets, and along multi-use trails and sidewalks to improve the pedestrian experience and have a cooling effect to further promote walking and biking. Such required design ensures reductions in vehicle miles traveled and greenhouse gas emissions.
PDF-LU-8:	**Other Integrated Project Features.** The lake promenade and integrated trail system shall be required to connect the residential, retail, restaurant, recreational, hotel, and other uses, providing a route that users can walk and bike along. Sidewalk improvements shall be provided throughout the community to promote walking. Bike lanes and shared-use streets shall be incorporated through the Specific Plan area to complement the new and existing development in a way that promotes the human scale. These bike lanes shall connect to existing Class II bike lanes on Cactus Ave., Nason Street, Iris Ave, Lasselle Street, and John F. Kennedy Dr.
PDF-LU-9:	**Complete Streets.** Complete streets, which are local roads and streets that adequately accommodate the needs of bicyclists, pedestrians, and transit riders, as well as motorists, shall be provided to promote pedestrian and bicycle use through the incorporation of design features such as multi-use trails and sidewalks, crosswalks, shared roads, landscaping, and pedestrian bridges across arterials and the on-site drainage.
PDF-LU-10:	**Traffic Calming.** Traffic calming design of neighborhoods streets shall include street chokers (curb extensions that narrow a street by widening the sidewalks or planting strips, effectively creating a pinch point along the street), crosswalks, roundabouts landscaped medians, and shared street design to promote safer streets.
PDF-LU-11:	**Roundabouts.** The Project shall include roundabouts as a means of traffic calming and GHG reduction.
Wildfire	
PDF-WF-1:	1. All developments within the Project site must include a proactive wildfire education program utilizing a multi-pronged approach to fire safety following the "Ready, Set, Go!" approach to wildfire evacuation, to include, but not limited to: a. Annual wildfire and evacuation safety awareness meeting in coordination with local fire agencies. b. Annual reminder notices will be provided to each employee encouraging them to review this wildfire education program and be familiar with evacuation protocols

Table 1A-2. Project Design Features

	c. The development's website will host a webpage dedicated to wildfire and evacuation education and awareness, which should include a copy of this wildfire education program and the resources provided herein. 2. All homeowners associations and property managers for developments within the Project site must designate Fire Safety Coordinators to oversee implementation of the wildfire education program. The Fire Safety Coordinators shall: a. Prepare and distribute the annual reminder notice that shall be provided to each occupant encouraging them to review this wildfire education program and be familiar with community evacuation protocols. b. Coordinate with local fire agencies to hold an annual fire safety and evacuation preparedness informational meeting for occupants. The meeting should be attended by representatives of appropriate fire agencies and important fire and evacuation information should be reviewed. c. Maintain fire safety information on the development's website, including the wildfire education program and materials from the "Ready, Set, Go!" Program. 3. For non-residential uses, Fire Safety Coordinators shall also: a. Coordinate an annual fire evacuation drill/fire exercise to ensure proper safety measures have been implemented, facility awareness and preparation of a facility-wide "Ready, Set, Go!" plan. The Fire Safety Coordinator will also organize employee training and awareness through various practices: i. New hire fire awareness and evacuation training ii. Ongoing staff training iii. Facility sweeps by trained staff b. Strategically place fire safety and evacuation/sheltering protocol information.

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
Would the project have a substantial adverse effect on a scenic vista?	Less Than Significant	N/A	Less Than Significant
Would the project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact	N/A	No Impact
In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant	N/A	Less Than Significant
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on aesthetic resources?	Less Than Significant	N/A	Less Than Significant
Agriculture and Forestry Resources			
Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	N/A	No Impact
Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact	N/A	No Impact
Would the project result in the loss of forest land or conversion of forest land to non-forest use?	No Impact	N/A	No Impact
Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on agriculture and forestry resources?	Less Than Significant	N/A	Less Than Significant
Air Quality			
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Potentially Significant	**MM-AQ-1:** Update the Regional Growth Forecast. The applicant has informed the Southern California Association of Governments (SCAG) of the Project so that SCAG's next Regional Transportation Plan/Sustainable Communities Strategy, Connect SoCal 2024, can appropriately reflect residential housing, population, and employment locations and forecasts in Moreno Valley. The updated information provided to SCAG is anticipated to be used by the South Coast Air Quality Management District (SCAQMD) to update the Air Quality Management	**Significant and Unavoidable**

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Plan (AQMP). The applicant shall prepare and submit a letter notifying SCAQMD of this revised forecast for use in the future updates to the plan as required. **MM-AQ-2:** Construction Equipment Exhaust Minimization. Prior to the commencement of any construction activities, the Applicant or its designee shall provide evidence to the City of Moreno Valley (City) that (1) for off-road equipment with engines rated at 25 horsepower or greater, no construction equipment shall be used that is less than Tier 4 Final, and (2) for off-road equipment with engines rated less than 25 horsepower, all construction equipment used shall be electrically powered. An exemption from this requirement may be granted if (1) the applicant documents equipment with Tier 4 Interim engines are not reasonably available, and (2) the required corresponding reductions in criteria air pollutant emissions can be achieved for the project from other combinations of construction equipment. Before an exemption may be granted, the Applicant's construction contractor shall: (1) demonstrate that at least 3 construction fleet owners/operators in Riverside County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Riverside County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using California Emissions Estimator Model (CalEEMod) or other industry standard emission estimation method and documentation provided to the City to confirm that necessary project-generated emissions reductions are achieved.	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-AQ-3: Additional Construction Equipment Reductions. Prior to the issuance of grading permits, the Project applicant or its designee shall provide evidence to the City that the following strategies shall be implemented during the Project's construction phase: A. Use electric or hybrid powered equipment for generators and other small pieces of equipment over 25 horsepower (e.g., forklifts), as commercially available. B. Use cleaner-fuel equipment such as replacing diesel fuel with compressed natural gas (CNG) or renewable diesel, as commercially available. Commercially available equipment is herein defined as equipment sourced within 50 vehicle miles of the Project site and within 10 percent of the cost of the diesel-fueled-equivalent equipment. The Project applicant must contact at least three (3) contractors or vendors within Riverside County and submit to the City justification if the specified equipment is not commercially available. **MM-AQ-4:** Limit Truck and Equipment Idling During Construction. The Project shall reduce idling time of heavy-duty trucks either by shutting them off when not in use or reducing the time of idling to no more than 3 minutes (thereby improving upon the 5-minute idling limit required by the state airborne toxics control measure 13 CCR 2485). The Project shall post clear signage reminding construction workers to limit idling of construction equipment. **MM-AQ-5:** Construction Dust Control Plan. Prior to the issuance of grading permits, the Project applicant or its designee shall develop and	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		implement a Dust Control Plan to reduce Project-generated dust during construction and ensure compliance with the South Coast Air Quality Management District (SCAQMD) Rule 403. The Dust Control Plan shall include at a minimum the following control strategies: a. Water or use another SCAQMD-approved dust control non-toxic agent shall be used on the grading areas at least three times daily. b. A 15 mile per hour speed limit on unpaved surfaces shall be enforced. c. All main roadways shall be constructed and paved as early as possible in the construction process. d. Building pads shall be finalized as soon as possible following site preparation and grading activities. e. Grading areas shall be stabilized as quickly as possible. f. Chemical stabilizer shall be applied, a gravel pad shall be installed, or the last 100 feet of internal travel path within the construction site shall be paved prior to public road entry, as well as and for all haul roads. g. Wheel washers shall be installed adjacent to the apron for tire inspection and washing prior to vehicle entry on public roads. h. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence.	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		i. Sufficient perimeter erosion control shall be provided to prevent washout of silty material onto public roads. j. Unpaved construction site egress points shall be graveled to prevent track-out. K Construction access points shall be wet-washed at the end of the workday if any vehicle travel on unpaved surfaces has occurred. l. Transported material in haul trucks shall be watered or treated. m. All soil disturbance and travel on unpaved surfaces shall be suspended if winds (instantaneous gusts) exceed 25 miles per hour. n. On-site stockpiles of excavated material shall be covered. o. Haul truck staging areas shall be provided for loading and unloading of soil and materials and shall be located away from sensitive receptors at the farthest feasible distance. p. Construction traffic control plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections to the extent feasible. Construction Traffic Control plans shall be finalized and approved prior to issuance of grading permits. **MM-AQ-6:** Notification of Construction Activities. Prior to the commencement of any construction activities, the applicant or its designee shall provide evidence to the City of Moreno Valley that the applicant has employed a construction relations officer who will address community concerns regarding on-site construction activity. The applicant shall provide public notification in the form of a	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		visible sign containing the contact information of the construction relations officer, who shall document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations along Cactus Avenue, Iris Avenue, Laselle Street, and Oliver Street and noted on grading and improvement plans. **MM-AQ-7:** Use of Super-Compliant Low-VOC Paint During Construction. During construction, the Project shall use super-compliant low volatile organic compounds (VOC) paint (less than 10 grams per liter VOC) for all interior and exterior paint applications for residential and non-residential land uses. **MM-AQ-8:** Low-VOC Cleaning Supplies and Paint Educational Program. Prior to the occupancy of any on-site development, the applicant or its designee shall provide evidence to the City of Moreno Valley that the applicant/phase developer has developed a Green Cleaning Product and Paint education program to be made available at rental and purchasing offices and/or on websites. The educational program shall include a flyer (hardcopy and/or digital) that includes, at a minimum, an explanation of what volatile organic compounds (VOCs) are, how VOCs affect us, where to find low-VOC alternatives for cleaning supplies and paint, and additional resources for learning more. **MM-AQ-9:** Use Low-VOC Cleaning Supplies and Paint for Applicant and Homeowners Association Operated Spaces. Prior to the issuance of building permits, the applicant or its designee shall provide evidence to the City of Moreno Valley that for applicant (or its designee) and homeowners association operated	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		spaces that provisions are in place to ensure only zero- or low-volatile organic compound (VOC) cleaning supplies and super compliant-VOC paints (less than 10 grams per liter VOC) are used during Project operation. **MM-AQ-10**: Use of Zero-Emission Landscape Equipment for Applicant-Operated and Homeowners Association Land. Only zero-emission landscaping equipment will be used during project operation on land controlled by the applicant (or its designee) or a homeowners association. Gasoline-fueled landscaping equipment will be prohibited. **MM-AQ-11:** Landscape Maintenance Equipment Emission Reduction. The Project Applicant shall implement the following landscape maintenance equipment reduction measures: a) Outdoor Electrical Outlets**.** Prior to the issuance of building permits, the Project Applicant or its designee shall provide evidence to the City of Moreno Valley that the design plans include electrical outlets on the exterior of the structure to facilitate use of electrical lawn and garden equipment. b) Encourage Utilization of Existing Yard Equipment Exchange and Rebate Programs. The applicant (of its designee) or Project's future homeowners association shall educate future residents about the South Coast Air Quality Management District (SCAQMD) Electric Lawn Mower Rebate Program and the Commercial Electric Lawn and Garden Equipment Exchange Program. When conventional gasoline-powered yard equipment (e.g., lawn mowers, leaf blowers and vacuums,	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		shredders, trimmers, and chain saw) are exchanged for electric and rechargeable battery-powered yard equipment, direct greenhouse gas (GHG) emissions from fossil-fuel combustion are displaced by indirect GHG emissions associated with the generation of electricity used to power the equipment.	
Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Potentially Significant	**MM-AQ-2** through **MM-AQ-11** (see above)	**Significant and Unavoidable**
Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant	**MM-AQ-2** through **MM-AQ-7** (see above)	**Significant and Unavoidable**
Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on air quality resources?	Potentially Significant	**MM-AQ-1** through **MM-AQ-11** (see above)	**Significant and Unavoidable**
Biological Resources			
Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Less Than Significant	**MM-BIO-1** through **MM-BIO-3** would be implemented to further minimize the Project's less than significant impact and ensure compliance with regulatory requirements. **MM-BIO-1: Burrowing Owl.** ▪ Within 30 days of any Project-related construction or ground-disturbance activities within suitable burrowing owl habitat on the site, a pre-construction survey shall be conducted by a qualified biologist to search for burrows or suitable artificial openings that may support roosting or nesting burrowing owls. The surveys	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		shall follow the protocols outlined in the Riverside Conservation Authority's 2006 Burrowing Owl Survey Instructions for the MSHCP Area. If no active burrows/burrow surrogates are located, no further mitigation is required. ▪ If burrows/surrogate burrows are determined to be active during the survey, as evidenced by detection of burrowing owl individuals or sign (e.g., owl pellets, molted feathers, abundant insect remains, whitewash) at the burrow entrance, the burrow shall be demarcated on an appropriate map and highly visible fencing immediately erected around the burrow to protect it from inadvertent ground-disturbing activities. If the active burrows are located during the nesting season, the qualified biologist shall take the appropriate actions (e.g., burrow monitoring, use of motion-detection cameras) to determine if the burrow is being used as a nest burrow. If the burrow is determined to be an active nest burrow, a minimum 500-foot no disturbance buffer shall be established around the burrow. The buffer shall be demarcated on appropriate construction maps and in the field by highly visible fencing. Signage indicating that the area within the fencing is not to be entered shall be attached at appropriate distances along the fence. ▪ A qualified biologist shall be on site at any time construction or ground disturbance activities will occur within 600 feet of the nest burrow to ensure no encroachment occurs within the buffer area, to check on buffer fencing stability	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		and effectiveness, and to monitor the behavior of adult burrowing owls to ensure that noise and activity associated with the construction activities is not causing excessive agitation or other abnormal behavior in observed adult burrowing owls. If, in the professional opinion of the biologist, observed continued agitation could result in adult burrowing owls being away from an active nest burrow for extensive periods of time that would be considered harmful to eggs or young or that could result in nest abandonment, the biologist shall have the authority to stop construction or ground disturbance activities within the 600 feet of the nest burrow until it is determined by the biologist that the agitated or other abnormal behavior has ceased long enough such that no harm to an active nest burrow is expected to occur. ▪ The no-disturbance buffer and associated fencing shall be in place, and the restriction on construction activities within the fenced area enforced, until it is determined by the qualified biologist that all young have fledged from the nest burrow and are no longer dependent upon the use of the burrow for survival. Following the fledging of young from any active burrows, burrowing owls can be excluded from future use of the burrow following California Department of Fish and Wildlife (CDFW) protocols. ▪ If active burrows are detected outside of the nesting season, or during the nesting season but it has been determined that the burrow is not being used as a nest burrow, burrowing owls can	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		be excluded from use of the burrow following CDFW protocols. ▪ All pipes of at least 4 inches or more in diameter that are being temporarily stored or that are otherwise located on the Project site awaiting installation during construction or ground disturbance activities shall be inspected at the beginning of each day to ensure that no burrowing owls are temporarily utilizing the pipes for shelter. Alternatively, the pipes can be capped at the end of each day (after first inspecting each pipe for burrowing owls or other animal species) and uncapped the following day prior to use. If owls or other animal species are observed within a pipe during the inspections, a qualified biologist, or other personnel trained by the biologist, shall use appropriate means to safely encourage the owl/animal to exit the pipe. **MM-BIO-2: Least Bell's Vireo.** ▪ A qualified biologist shall conduct pre-construction surveys within the riparian habitat mitigation area where least Bell's vireos were previously observed in 2023 to determine if least Bell's vireos are continuing to nest within this area. The extent and timing of the surveys shall depend on when construction or ground disturbance activities will occur within 700 feet of the riparian area during the vireo nesting season. The focus shall be to conduct as many surveys as possible (up to two surveys per week and a maximum of eight total surveys). Alternatively, if ground disturbance/construction activities will occur during future vireo nesting seasons, the assumption shall be made that	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		least Bell's vireo continue to nest in the same areas as were observed in 2023, thus negating the need to conduct additional presence/absence surveys. ▪ If surveys are conducted and no least Bell's vireos are observed, then no additional mitigation measures need to be implemented. If surveys are conducted and least Bell's vireos are observed, and it is determined, through additional surveys and behavioral observations, that a nesting territory has been established within the area being surveyed, then a no-disturbance buffer of at least 500 feet from the edge of the riparian habitat area where the nesting territory occurs shall be established. The buffer shall be demarcated on all appropriate construction maps and in the field by highly visible fencing. Signage indicating that the area within the fencing is not to be entered shall be attached at appropriate distances along the fencing. ▪ If active nest territories are determined to be present, a qualified biologist shall be on site any time construction or ground disturbance activities will occur within 700 feet of the Line F mitigation channel riparian area and/or the riparian area to the east of the Riverside County flood control channel to ensure that no encroachment occurs within the buffer area, to check on buffer fencing stability and effectiveness, and to monitor the behavior of adult vireos to watch for any evidence of alarm vocalizations or other abnormal behavior from that might indicate some level of agitation	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		associated with ground disturbance/ construction-related noise or visual activity. If, in the professional opinion of the biologist, continued agitated behavior of adult birds could result in the birds being away from an active nest for extensive periods of time that would be considered harmful to eggs or young or that could result in nest abandonment, the biologist shall have the authority to stop construction/ ground disturbance activities until it is determined by the biologist that the agitated or other abnormal behavior has ceased long enough such that no harm to an active nest is expected to occur. ▪ The no-disturbance buffer and associated fencing shall be in place, and the restriction on construction activities within the fenced area enforced, until it is determined by the qualified biologist that all young and adult vireos have left the riparian habitat area and/or the breeding season is over (generally by July 30). **MM-BIO-3: Other Avian Species.** ▪ A pre-construction nesting bird survey shall be completed by a qualified biologist if construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the avian nesting season to determine if any native birds protected by the federal Migratory Bird Treaty Act and/or the California Fish and Game Code are nesting within proposed ground-disturbance areas or within 200 feet of these disturbance areas.	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ If any active nests are observed during surveys, a suitable avoidance buffer from the nests shall be determined by the qualified biologist. The avoidance buffer distance shall consider such factors as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule. ▪ Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate materials and shall be maintained until any young of an active nest have fledged and are no longer dependent upon the nest for survival as determined by the qualified biologist.	
Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Less Than Significant	N/A	Less Than Significant
Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less Than Significant	N/A	Less Than Significant
Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant	**MM-BIO-4:** City Regulated Trees Prior to any removal of trees potential regulated by the City of Moreno Valley Municipal Code, a qualified arborist shall conduct a tree survey in the area on the Project site in which regulated trees are proposed to be removed. Date to be collected on appropriate data forms include the exact location of the tree, species, diameter at breast height, and information on the general character and health of the tree. All regulated trees to be removed shall be flagged in the field and entered into a GIS database. Pursuant to Section 9.17.03 of the City of Moreno Valley Municipal Code the removal of existing trees with four-inch or greater trunk diameters at breast heigh (dbh) shall be replaced at a 3:1 ratio, with a minimum 24-inch box size trees of the same species, or a minimum 36-inch box for a 1:1 replacement, in locations approved by the City. Pursuant to the Municipal Code, removal of trees that would be classified as heritage trees (trees with 15-inch dbh or more) is generally prohibited unless certain conditions are met (i.e., the tree(s) poses a dangerous or hazardous condition to people, structures and property, or if the tree is diseased, dying, or dead, and if a reasonable undertaking to preserve the tree had occurred).	Less Than Significant with Mitigation Incorporated
Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact	N/A	No Impact
Would the project have a cumulative effect on biological resources?	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Cultural Resources			
Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	No Impact	N/A	No Impact
Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially Significant	**MM-CUL-1: Archaeologist Retained.** Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project archeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager, and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training for those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make	Less Than Significant with Mitigation Incorporated

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		themselves available to provide the training on an as-needed basis. **MM-CUL-2: Native American Monitoring.** Prior to the issuance of a grading permit, the Developer shall secure agreements with the Consulting Tribes for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth-moving activities in the affected area in the event that suspected archaeological resources are unearthed. **MM-CUL-3: Cultural Resource Monitoring Plan (CRMP).** Prior to the issuance of the grading permit, a Cultural Resource Monitoring Plan (CRMP) is to be developed and approved. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a CRMP in consultation pursuant to the definition in AB52 to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting Tribe is defined as a Tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include: A. Project description and location B. Project grading and development schedule; C. Roles and responsibilities of individuals on the Project;	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		D. The pre-grading meeting and Cultural Resources Worker Sensitivity Training details; E. The protocols and stipulations that the contractor, City, Consulting Tribe (s) and Project archaeologist will follow in the event of inadvertent cultural resource discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resource's evaluation. F. The type of recordation needed for inadvertent finds and the stipulations of recordation of sacred items. G. Contact information of relevant individuals for the Project. **MM-CUL-4: Grading Note**. The City shall verify that the following note is included in the Grading Plan: "If any suspected archaeological resources are discovered during ground–disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find." **MM-CUL-5: Inadvertent Finds.** If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to Project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		significance due to its sacred or cultural importance as determined in consultation with the Native American Tribe(s). Tribal cultural resources are excluded from the definition of unique cultural resources as those resources are defined by the tribal values ascribed to them by their affiliated communities. Treatment of tribal cultural resources inadvertently discovered during the project's ground-disturbing activities shall be subject to the consultation process required by state law and AB 52. i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the Project Applicant, the Project Archaeologist, the Tribal Representative(s), and the City to discuss the significance of the find. ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Tribal Representative(s) and the Project Archaeologist, a decision shall be made, with the concurrence of the City, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources. iii. Further ground disturbance, including but not limited to grading, trenching, etc., shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal Monitors if needed.	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils, and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition/Mitigation Measures. v. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan. vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Project Applicant and the Tribe(s) cannot agree on the significance or the mitigation of the archaeological or cultural resources, these issues will be presented to the City for decision. The City shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, and recommendations of the project archeologist and shall consider the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		the law, the decision of the City shall be appealable to the City Planning Commission and/or City Council. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to the City of Moreno Valley upon the completion of a treatment plan and final report detailing the significance and treatment finding. **MM-CUL-6: Final Disposition.** In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for the final disposition of the discoveries: a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley: i. Preservation-in-place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources. ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with the exception that sacred items, burial goods, and Native American human remains are excluded. Any reburial process shall be culturally appropriate. The listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Report shall be filed with the City under a confidential cover and not subject to Public Records Requests. iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning findings of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to the City of Moreno Valley upon the completion of a treatment plan and final report detailing the significance and treatment finding. **MM-CUL-9: Phase IV Report.** Prior to the final inspection, the Project Archeologist is to submit two (2) copies of the Phase IV Cultural Resources Monitoring Report that complies with the Planning	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The City shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the City shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Pechanga Cultural Resources Department, and Consulting Tribe(s), if requested.	
Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially Significant	**MM-CUL-7: Human Remains.** If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to the origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA). **MM-CUL-8: Non-Disclosure.** It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		exemption set forth in California Government Code 7927.000, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 7927.000.	
Would the project have a cumulative effect on cultural resources?	Potentially Significant	**MM-CUL-1** through **MM-CUL-9.**	Less than Significant with Mitigation Incorporated
Energy			
Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant	N/A	Less Than Significant
Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on energy resources?	Less Than Significant	N/A	Less Than Significant
Geology and Soils			
Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
A. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	Less Than Significant	N/A	Less Than Significant
B. Strong seismic ground shaking?	Less Than Significant	N/A	Less Than Significant
C. Seismic related ground failure including liquefaction?	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
D. Landslides?	Less Than Significant	N/A	Less Than Significant
Would the project result in substantial soil erosion or the loss of topsoil?	Less Than Significant	N/A	Less Than Significant
Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less Than Significant	N/A	Less Than Significant
Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less Than Significant	N/A	Less Than Significant
Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact	N/A	No Impact
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant	**MM-GEO-1:** Paleontological Resources Impact Mitigation Program and Paleontological Monitoring. Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) 2010 guidelines. The SVP 2010 guidelines define a qualified paleontologist as having the following: 1. A graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; and demonstrated competence in field techniques, preparation, identification, curation, and reporting in the state or geologic province in which the project occurs. An advanced degree is	Less than Significant with Mitigation Incorporated

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		less important than demonstrated competence and regional experience. 2. At least two full years professional experience as assistant to a Project Paleontologist with administration and project management experience; supported by a list of projects and referral contacts. 3. Proficiency in recognizing fossils in the field and determining significance. 4. Expertise in local geology, stratigraphy, and biostratigraphy. 5. Experience collecting vertebrate fossils in the field." The qualified paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Project with the performance criteria set forth herein. The PRIMP shall be consistent with the SVP 2010 guidelines and outline requirements for preconstruction meeting attendance, worker environmental awareness training, and where paleontological monitoring is required within the Project site based on construction plans and/or geotechnical reports. The PRIMP shall also include the procedures for adequate paleontological monitoring and discoveries treatment, paleontological methods (including sediment sampling for microinvertebrate and microvertebrate fossils), reporting, and collections management. The PRIMP shall also include a statement that any fossil lab or curation costs (if necessary due to fossil recovery) are the responsibility of the Project proponent/applicant. A qualified paleontological monitor shall be on site during initial rough grading and other significant	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		ground-disturbing activities (including drilling greater than 2 feet in diameter) in areas underlain by early Pleistocene very old alluvial fan deposits and below a depth of 5 feet beneath the ground surface in areas underlain by Holocene sand and gravel deposits to determine if they are old enough to preserve scientifically significant paleontological resources. The SVP 2010 guidelines define a qualified paleontological monitor as having the following: 1. BS or BA degree in geology or paleontology and one year experience monitoring in the state or geologic province of the specific project. An associate degree and/or demonstrated experience showing ability to recognize fossils in a biostratigraphic context and recover vertebrate fossils in the field may be substituted for a degree. An undergraduate degree in geology or paleontology is preferable, but is less important than documented experience performing paleontological monitoring, or 2. AS or AA in geology, paleontology, or biology and demonstrated two years experience collecting and salvaging fossil materials in the state or geologic province of the specific project, or 3. Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in the state or geologic province of the specific project. 4. Monitors must demonstrate proficiency in recognizing various types of fossils, in collection methods, and in other paleontological field techniques.”	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor will allow grading to recommence in the area of the find.	
Would the project have a cumulative effect on geology and soils resources?	Potentially significant	**MM-GEO-1** (see above)	Less than Significant with Mitigation Incorporated
Greenhouse Gas Emissions			
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Potentially Significant	**MM-GHG-1:** Installation of Additional Electric Vehicle Chargers Beyond Project Design Feature. The Project shall install an additional 180 Level 2 240v electric vehicle supply equipment (or stations) in Project parking lots or remaining garages beyond the commitment in PDF-AQ/GHG-1. As PDF-AQ/GHG-1 requires 3,566 (or 15%) Level 2 240v electric vehicle supply equipment (or stations) at Project buildout, implementation of MM-GHG-1 would require installation of a total of 3,746 charging stations at Project buildout. To ensure contemporaneous GHG emissions reductions when natural-gas related GHG emissions are emitted by the Project's restaurant land uses, at least 90 EV chargers above CALGreen Tier 2 standards shall be installed and operational at 50% occupancy of the restaurant land uses and at least 180 EV chargers above CALGreen Tier 2 standards shall be installed and operational at 100% occupancy of the restaurant land uses.	Less than Significant with Mitigation Incorporated

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-AQ-2 and **MM-AQ4** (see above)	
Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Potentially Significant	**MM-GHG-1, MM-AQ-2** and **MM-AQ4** (see above)	Less than Significant with Mitigation Incorporated
Would the project have a cumulative effect on greenhouse gas emissions?	Potentially Significant	**MM-GHG-1, MM-AQ-2** and **MM-AQ4** (see above)	Less than Significant with Mitigation Incorporated
Hazards and Hazardous Materials			
Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant	N/A	Less Than Significant
Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant	**MM-HAZ-1:** Site Characterization and Remediation. Following Project design finalization, but prior to the issuance of a grading permit, the Project applicant/developer or their designated contractor shall retain a qualified environmental consultant to conduct subsurface investigations to fully characterize the nature and extent of contamination at the Project site. The investigation will include preparation of a soil sampling and analysis plan (SAP), which will be reviewed and signed by a registered engineer or geologist with experience in site characterization. The SAP will take into account final design and proposed development of each area, including grading and excavation depths, building use and occupancy (commercial vs residential), and other features which could indicate applicable screening levels and screening requirements. The SAP shall include methods and procedures to evaluate areas of the Project site where there are known soil impacts, including the	Less than Significant with Mitigation Incorporated

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		former tank storage areas, vehicle maintenance areas, areas with elevated metals and pesticides, and sludge application areas. Soil sampling shall include at least two depths at each sample location to properly characterize potential subsurface impacts, and will include analysis for petroleum hydrocarbons, VOCs, SVOCs, and metals. Samples from at least two different depths will be collected from more than two locations in each area of concern to properly characterize each area, including, at a minimum, each former UST location, each sludge application area, the vehicle maintenance and storage area, the wash down area, and areas with elevated metals and pesticides in surface soil samples (identified in the 1993 Phase II ESA) (shown in red and yellow on Figure 4.11-1). Soil vapor samples will be collected in the UST, maintenance, washdown, and sludge application areas, at dual depths, to properly characterize potential soil and soil vapor contamination due to historical site uses. The SAP will include applicable regulatory screening levels for both soil and soil vapor based on proposed site development. Site investigation will be conducted as outlined in the SAP. For soils, based on the results of the sampling and analysis and comparison to applicable regulatory screening levels, a soil management plan (SMP) shall be prepared by a qualified environmental consultant. The SMP will outline the proper screening, handling, characterization, transportation, and disposal procedures for contaminated soils on the Project site. The SMP will outline criteria for reuse on site, based on the final development plan	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		and land use in each area, including comparison to regulatory screening levels. The SMP will include procedures for removal and disposal of soils that do not meet reuse criteria, including transportation, documentation, and landfilling requirements. The SMP shall include health and safety and training procedures for workers who may come in contact with contaminated soils, and will include health and safety and site control measures to prevent contaminated material emissions from the site (such as dust suppression and vehicle tracking). The SMP shall be implemented by the Project applicant or their designated contractor for all confirmed and suspected contaminated soils which require excavation and off-site disposal. The SMP shall also include procedures for the identification and proper abandonment of underground storage tanks, should any be identified during demolition and construction activities around the existing dairies and residences. The SMP shall include all applicable federal, state, and local regulations (including Riverside County Department of Environmental Health) associated with handling, excavating, and disposing of contaminated soils; the proposed disposal facility that will accept the contaminated soils; and appropriate procedures, notifications, permitting requirements, handling, and disposal requirements for decommissioning any underground storage tanks. For soil vapor, based on the results of the sampling and analysis and comparison to applicable regulatory screening levels, a soil vapor mitigation plan (SVMP) shall be prepared by a qualified environmental consultant. The SVMP will outline	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		appropriate vapor mitigation methods for any proposed on-site buildings in areas where elevated soil vapor concentrations are identified above the applicable screening levels for the proposed land use (open space, residences, schools, etc.). The SVMP will be prepared with consideration of the SMP, as excavation of impacted soils may reduce soil vapor impacts. Vapor mitigation design features shall be implemented in accordance with the DTSC Vapor Intrusion Mitigation Advisory for all future residential buildings and enclosed structures in areas where soil vapor is present above applicable regulatory screening levels for the proposed land use. The construction contractor shall incorporate vapor mitigation design features into building plans that reduce potential vapor intrusion in buildings and enclosed structures on the Project site to below applicable screening levels. Vapor mitigation systems may be passive or active in nature, so long as they are designed to prevent vapor contamination in accordance with applicable DTSC regulations. Vapor mitigation systems must be reviewed and approved by the permitting agency(ies) prior to construction and prior to issuance of any certificate of occupancy. Operation of the Project shall maintain functionality of these features as required to ensure protection from vapor intrusion. Following completion of construction and occupancy of the buildings, indoor air monitoring will occur semiannually for one year to verify implemented measures are functioning properly and adequately mitigating vapor intrusion to below residential screening levels. If indoor air samples indicate vapor intrusion occurring at levels above applicable regulatory screening levels, modifications shall be	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		made, as necessary, to the designed system to improve the efficacy in reducing vapor intrusion to below applicable screening levels. **MM-HAZ-2:** Characterization and Closure of Dump Sites. Buried and open dump site areas identified on site will be characterized to define nature and extent of waste and potential contamination in surrounding soils and soil vapor. Soil will be sampled and analyzed for VOCs, metals, petroleum hydrocarbons, and SVOCs, while soil vapor will be analyzed for VOCs and methane. The full lateral and vertical extent of the waste will be characterized and limits of both waste fill and contamination, if any, will be determined based on this sampling and analysis. The results, along with a proposed closure plan, will be submitted to Riverside County DEH Environmental Cleanup Program for review and approval. Closure requirements will depend on the nature and extent of contamination and will ultimately be approved by Riverside County DEH in accordance with their rules and regulations. Excavation of the dump site area, if any, including exploration test pits, will be conducted following SCAQMD Rule 1150. Final closure requirements will be included in grading and development plans. If excavation is required, excavated wastes will be appropriately characterized and landfilled at a permitted off-site landfill in accordance with federal, state, and local rules and regulations. The excavation will be backfilled with either on-site soils or clean fill. Should imported fill be required, it will meet clean fill requirements established by DTSC in their 2001 Information Advisory Clean Imported Fill Material Fact Sheet.	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-HAZ-3: Water Quality Evaluation and Treatment. Prior to any groundwater extraction or use for filling and maintenance of the proposed lakes, groundwater quality shall be evaluated by collecting and analyzing water samples and comparing the analysis results to applicable water quality standards under the oversight of the Santa Ana Regional Water Quality Control Board (SARWQCB). Water quality standards shall be determined based on the proposed beneficial use of the lake, and include Environmental Screening Levels (ESLs) for freshwater ecotoxicity, as published by the Regional Water Quality Control Board in 2019, and Water Quality Objectives (WQO) for inland surface waters, as described in the Santa Ana Regional Water Quality Control Board's 2019 Santa Ana River Basin Plan. In the event groundwater quality does not satisfy applicable standards, water treatment systems shall be employed to ensure that groundwater discharged into the on-site lake meets all applicable water quality standards to the satisfaction of the SARWQCB. The treatment system shall be implemented and maintained as required by SARWQCB to ensure water quality standards continue to be met for the application of groundwater to the lakes for the duration of the proposed Project, or until groundwater is no longer used to fill the lakes. Sampling shall occur on a regular basis (at least annually) and results maintained for review by the SARWQCB and/or permitting agencies (EMWD, City of Moreno Valley) upon request. In the event groundwater treatment is insufficient to achieve water quality standards or is	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		infeasible, groundwater shall not be discharged to the lakes. **MM-HAZ-4:** Groundwater Well Decommissioning. Wells formerly used for irrigation on the site (Filaree, Scott, and Coray) that will not be used for Project operation shall be destroyed in accordance with applicable regulations subject to the following limitations. The Scott well (UCR Scott) has been identified as a "Representative Monitoring Point" for the Moreno Valley Production Area in the Groundwater Sustainability Plan (GSP) for the San Jacinto Groundwater Basin. As such, the Scott well must be protected as part of the Project, or a replacement well shall be installed. The Project applicant will coordinate with Eastern Municipal Water District (EMWD), which acts as the Groundwater Sustainability Agency for the San Jacinto Basin, to either protect the Scott well or install an alternate well. A well management plan shall be prepared for the former agricultural wells, Filaree, Scott, and Coray. The management plan will be written in accordance with applicable state and local laws, including those of Riverside County Department of Environmental Health (DEH) and submitted to Riverside County DEH for review and approval. A copy of the approved management plan will be provided to EMWD within 10 business days of receiving the approval from Riverside County DEH. The plan will include proposed protection measures for wells necessary for Project site operation and/or monitoring related to the GSP and will include proposed destruction procedures for wells to be destroyed. The plan will also outline necessary permits, notifications, and	

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		reports required per rule and regulation, such as submittal of an abandonment report to Riverside County DEH. The approved management plan shall be followed, and on-site wells destroyed or protection measures put in place prior to construction in accordance with applicable laws and regulations.	
Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Potentially Significant	**MM-HAZ-1** through **MM-HAZ-4** (see above)	Less than Significant with Mitigation Incorporated
Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	No Impact	N/A	
For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	N/A	No Impact
Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	No Impact	N/A	No Impact
Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	No Impact	N/A	No Impact

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project have a cumulative effect on hazards or hazardous materials?	Potentially Significant	**MM-HAZ-1** through **MM-HAZ-4** (see above)	Less than Significant with Mitigation Incorporated
Hydrology and Water Quality			
Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Potentially Significant	**MM-HAZ-3** through **MM-HAZ-4** (see above)	Less than Significant with Mitigation Incorporated
Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Potentially Significant	**MM-HYD-1:** Lake Improvement Plans Review and Approval. Prior to grading, the developer shall submit improvement plans for the lakes and any related flood control improvements to the City of Moreno Valley, Riverside County Flood Control and Water Conservation District, and the California Department of Fish and Wildlife for review and approval. **MM-HYD-2:** EMWD Review and Approval. Prior to the issuance of a grading permit, the Project applicant shall submit proposed groundwater extraction plans including wells to be used, pumping rates and duration, and total proposed pumping volumes for both initial filling of the lake and any subsequent annual maintenance pumping, to Eastern Municipal Water District (EMWD) for review and approval prior to commencement of any groundwater extraction activities. Any groundwater extraction from any of the existing on-site wells shall be metered and reported to EMWD in accordance with the direction given by EMWD. No pumping shall be permitted without prior approval by EMWD in accordance with the sustainability goals of the Groundwater Sustainability Plan for the West San Jacinto Groundwater Basin.	Less than Significant with Mitigation Incorporated

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	Less Than Significant	N/A	Less Than Significant
A. result in substantial erosion or siltation on or off site;	Less Than Significant	N/A	Less Than Significant
B. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	Less Than Significant	N/A	Less Than Significant
C. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Less Than Significant	N/A	Less Than Significant
D. impede or redirect flood flows?	Less Than Significant	N/A	Less Than Significant
In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Less Than Significant	N/A	Less Than Significant
Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Potentially Significant	**MM-HYD-1, MM-HYD-2, MM-HAZ-3** through **MM-HAZ-4** (see above)	Less than Significant with Mitigation Incorporated
Would the project have a cumulative effect on hydrology or water quality resources?	Potentially Significant	**MM-HYD-1, MM-HYD-2, MM-HAZ-3** through **MM-HAZ-4** (see above)	Less than Significant with Mitigation Incorporated
Land Use and Planning			
Would the project physically divide an established community?	Less Than Significant	N/A	Less Than Significant
Would the project cause a significant environmental impact due to a conflict with	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			
Would the project have a cumulative effect on land use resources?	Less Than Significant	N/A	Less Than Significant
Mineral Resources			
Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact	N/A	No Impact
Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	No Impact	N/A	No Impact
Would the project have a cumulative effect on mineral resources?	No Impact	N/A	No Impact
Noise			
Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Potentially Significant	**MM-NOI-1:** Construction Noise Barrier. For construction activities in Phase 4 and Phase 5 that would occur closer than 120 feet from an off-site adjacent residence, a 10-foot-high temporary noise barrier shall be installed and maintained between the construction zone and neighboring residences. The barrier shall have an STC rating of not less than 25. **MM-NOI-2:** Construction Noise Equipment Controls ▪ The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.	Less than Significant with Mitigation Incorporated

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		▪ Construction equipment will be muffled per manufacturer's specifications. Electrically powered equipment will be used instead of pneumatic or internal combustion powered equipment, where feasible. ▪ All stationary construction equipment will be placed in a manner so that emitted noise is directed away or blocked from sensitive receptors nearest the Project site where possible. **MM-NOI-3:** Traffic Calming Measures. Prior to issuance of the first certificate of occupancy, average speeds on the impacted segments of John F Kennedy Drive, Kitching and Mason Streets shall be reduced by 5 miles per hour or more through the implementation of one or more of the following measures: posting lower speed limits, installing speed humps, or narrowing the overall lane widths with planters or dedicated bike lanes. The impacted segments of these roadways include: ▪ John F. Kennedy Drive from Kitching Street to Lasselle Street, Intersection 12 to PA 2, and Oliver Street to Moreno Beach Drive. ▪ Kitching Street from Brodiaea to Moreno Beach Drive. ▪ Mason Street from E. Hospital to Iris Avenue.	
Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Less Than Significant	N/A	Less Than Significant
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
use airport, would the project expose people residing or working in the project area to excessive noise levels?			
Would the project have a cumulative effect on noise resources?	Potentially Significant	**MM-NOI-1** through **MM-NOI-3** (see above)	Less than Significant with Mitigation Incorporated
Population and Housing			
Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less Than Significant	N/A	Less Than Significant
Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact	N/A	No Impact
Would the project have a cumulative effect on housing and/or population resources?	Less Than Significant	N/A	Less Than Significant
Public Services			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:			
Fire protection?	Less Than Significant	N/A	Less Than Significant
Police protection?	Less Than Significant	N/A	Less Than Significant
Schools?	Less Than Significant	N/A	Less Than Significant
Parks?	Less Than Significant	N/A	Less Than Significant
Other public facilities?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on public services resources?	Potentially Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Recreation			
Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less Than Significant	N/A	Less Than Significant
Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on recreation resources?	Less Than Significant	N/A	Less Than Significant
Transportation			
Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less Than Significant	N/A	Less Than Significant
Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less Than Significant	N/A	Less Than Significant
Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less Than Significant	N/A	Less Than Significant
Would the project result in inadequate emergency access?	Less than Significant	**N/A**)	Less than Significant
Would the project have a cumulative effect on transportation resources?	Less than Significant	**N/A**)	Less than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Tribal Cultural Resources			
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant	**MM-CUL-1** through **MM-CUL-9** (see above)	Less than Significant with Mitigation Incorporated
A. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Potentially Significant	**MM-CUL-1** through **MM-CUL-9** (see above)	Less than Significant with Mitigation Incorporated
B. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Potentially Significant	**MM-CUL-1** through **MM-CUL-9** (see above)	Less than Significant with Mitigation Incorporated
Would the project have a cumulative effect on tribal cultural resources?	Potentially Significant	**MM-CUL-1** through **MM-CUL-9** (see above)	Less than Significant with Mitigation Incorporated
Utilities and Service Systems			
Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			
Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less Than Significant	N/A	Less Than Significant
Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Less Than Significant	N/A	Less Than Significant
Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less Than Significant	N/A	Less Than Significant
Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on utilities and/or service systems resources?	Less Than Significant	N/A	Less Than Significant
Wildfire			
Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Less Than Significant	**N/A**	Less than Significant
Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants	Less Than Significant	N/A	Less Than Significant

Table 1A-3. Summary of Project Impacts, Mitigation, and Level of Significance

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			
Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Less Than Significant	N/A	Less Than Significant
Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	Less Than Significant	N/A	Less Than Significant
Would the project have a cumulative effect on wildfire?	Less Than Significant	N/A	Less Than Significant

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2 Environmental Setting

This chapter provides a detailed history of the development and regulatory environmental setting of the Aquabella Specific Plan Amendment Project (Project) site, as well as a description of the current land uses and improvements at the Project site. This chapter also describes surrounding land uses and existing conditions.

2.1 Project Site History

The Project site has been planned for residential mixed-use development for several years, though the vision of how the property could best be utilized has changed over the years. From the 1960s to the 1980s, the University of California used the original 840-acre site, known as Moreno Valley Field Station (including the Project site), for agriculture studies. In the late 1980s when the University of California moved its studies to a research station located in Coachella Valley, it sold 80 acres to the County of Riverside for the Riverside County Regional Medical Center and 25 acres for an adjacent commercial site. The City of Moreno Valley (City) requested that the University of California prepare a Specific Plan to better plan for disposition and development of the 760-acre property (including the 25-acre site). The Moreno Valley Field Station Specific Plan 218 (original SP 218), associated California Environmental Quality Act (CEQA) documents, and subsequent amendments and CEQA documents are summarized below.

2.1.1 The Field Station Specific Plan

The original SP 218 set forth a plan to develop approximately 710 acres of the then 760-acre site in order to complement existing land uses, meet market demands, and positively contribute to the City (City of Moreno Valley 1999a). Specifically, the original SP 218 envisioned development of 2,922 single-family and multifamily homes on approximately 399 acres, a 148.7-acre golf course, 51 acres of parks, 24 acres of retail/commercial, and 80 acres of school and recreational areas, including a high school, middle school, two elementary schools, ball fields, and active play areas. Other proposed improvements covered traffic circulation, flood control, and water and sewer services.

In 1997, the City prepared a draft environmental impact report (EIR) (State Clearinghouse Schedule No. 93113076) to evaluate the environmental effects of implementing the original SP 218. In October 1998, after responding to public and agency comments, the City completed the Final EIR, and in February 1999, the City Council certified the Final EIR for the Moreno Valley Field Station Specific Plan (1999 EIR) (City of Moreno Valley 1999b).

In April 1999, the San Bernardino Valley Chapter of the Audubon Society and the Sierra Club filed a lawsuit against the City and the Regents of the University of California (Riverside County Superior Court Case No. 326810) challenging the 1999 EIR. The suit claimed that the 1999 EIR violated CEQA and state planning and zoning laws.

In June 1999, the parties to that litigation reached a settlement and agreed to a court order (writ) requiring the City to prepare a supplemental EIR to further evaluate traffic and biota impacts associated with the original SP 218. Specifically, the writ required that the supplemental EIR include a revised traffic analysis, specify additional mitigation for biological resources, and consider a specific design alternative. In May 2003, the City completed the supplemental EIR consistent with the settlement and certified the Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) (City of Moreno Valley 2003). The 1999 EIR and 2003 Supplemental EIR addressed impacts, like the analysis presented in Chapter 4, Environmental Impact Analysis.

2.1.2 The 2005 Aquabella Specific Plan Amendment

In January 2004, a 685-acre portion of the Specific Plan Area (Aquabella site), still owned by the University of California, was purchased through a public bid. The buyer, in consultation with the City and other agencies, modified certain features of the original SP 218 that were deemed infeasible or undesirable. For example, a proposed elementary school site located north of Cactus Avenue was within the restricted setback of a high-pressure gas line along the north side of Brodiaea Avenue, so it was removed from the plan. Similarly, the original SP 218 was approved with an 18-hole public golf course, but because the proposed course would create needless competition with the nearby Moreno Valley Ranch 27-hole championship golf course directly to the south and east, it was also removed. Finally, at that time, the City had a projected demand for active-adult residential opportunities.

To address these changing conditions, in 2005, the owner sought a Specific Plan Amendment (SPA) to SP 218 for the Aquabella site (2005 Aquabella SPA) (City of Moreno Valley 2005a). Like the original SP 218, the 2005 Aquabella SPA proposed up to 2,922 single-family and multifamily homes; however, 2,702 were to be age restricted as part of a gated, active-adult community (55 years of age and older). The commercial area was slightly increased from 24 acres to 25 acres. Based on meetings with the local school district, the future elementary and middle school sites identified in the original SP 218 were no longer required, due to the conversion of the site primarily to an active adult community, which does not generate school-age residents. The 50-acre high school site had been previously sold to the Moreno Valley Unified School District for construction of the now existing Vista del Lago High School campus; the high school remained unchanged in the 2005 Aquabella SPA.

In lieu of a golf course, the 2005 Aquabella SPA proposed 40 acres of lakes, clubhouse facilities, a 300-room hotel, trail and bicycle paths, and other amenities. It also proposed the elimination and reconfiguration of a previously proposed extension of John F. Kennedy Drive between Lasselle Street and Oliver Avenue, due primarily to the lower trip generation rate for the active-adult residential community component of the Aquabella development. The 2005 Aquabella SPA further proposed approximately 16.3 acres of open space/drainage channel facilities and 50.6 acres of circulation corridors.

To evaluate the environmental effects arising from the 2005 Aquabella SPA, in January 2005, the City completed an addendum to the previously certified 1999 EIR and 2003 Supplemental EIR. The City determined the addendum was the appropriate type of environmental document primarily because the 2005 Aquabella SPA made minor changes to the land use designations contained in the original SP 218, made improvements to the internal layout and design, and did not increase the total number of homes. Environmental impacts would be similar or reduced compared to the original SP 218.

On November 22, 2005, the City Council considered the Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum) and approved the General Plan Amendment (PA04-0070), Specific Plan Amendment (P04-082), Tentative Parcel Map (PA04-0069), and Development Agreement (PA04-0005) for the 2005 Aquabella SPA (City of Moreno Valley 2005b). As approved, the 2005 Aquabella SPA authorized the development of a maximum of 2,922 homes, approximately 40 acres of lakes, a 300-room hotel, 25 acres of commercial uses, open space, recreation, public facilities and services, infrastructure and utility improvements, and other amenities.

2.1.3 Aquabella Implementation and Development

Since the 2005 approval, significant portions of the 2005 Aquabella SPA were implemented, including, among other things, compliance with conditions of approval and attainment of required federal, state, and regional permits. Specifically, the required permits were secured to address impacts to on-site drainages, including the on-site flood control channel traversing the southeast portion of the Aquabella site. Approximately 437 acres, or 65%, of the Aquabella site (including the lakes) were graded, and on-site backbone infrastructure (i.e., internal roadways, transportation, and drainage facilities) were developed or facilitated.

In addition, the first residential phase associated with the 2005 Aquabella SPA, a 220-unit multifamily residential complex situated on the Aquabella site's northwest corner within Planning Area 2, is now developed as a non-age-restricted apartment complex. Federal, state, and regional permitting includes the following:

- **Section 1602 Streambed Alteration Agreement** issued by the California Department of Fish and Wildlife, SAA No. 1600-2005-0146-R6 and SAA No. 1600-202-0173-R6 (Revision 1), in 2006 and 2013, respectively
- **Clean Water Act Section 404 Permit** issued by the U.S. Army Corps of Engineers (Section 404 Permit-200501583-JPL, April 25, 2006, and extended June 2011)
- **Clean Water Act Section 401 Water Quality Certification** issued by the Santa Ana Regional Water Quality Control Board in January 2006
- **Conditional and final letters** issued by the Federal Emergency Management Agency in 2004 and 2005 (LOMR 04-09-073P and 90-09-08R; CLOMR 06-09-A709R)
- **Water Quality Management Plan** approval by the City in October 2007 (PA04-0069)
- **Master Plan of Service** approved by the Eastern Municipal Water District in June 2007
- **Mass Grading and Erosion Control Plan and Permit** issued by the City in July 2007 (Permit No. PK05-0266 and City ID 2611)
- **County of Riverside Stephens' Kangaroo Rat Habitat Conservation Plan fee** of $322,450 paid in June 2006

In 2007, as approved as part of the 2005 Aquabella SPA, the Riverside County Flood Control and Water Conservation District completed drainage channel improvements, including a flood control channel and a riparian buffer area, within the southeast portion of the Aquabella site. These improvements ensure that adequate storm drain system capacity is maintained. In addition, pursuant to the applicable Section 404, 401, and 1602 permitting, all required mitigation has been completed for the drainage channel improvements. The installed concrete and earthen channel (and associated earthen basin) are continually maintained in conformance with permit requirements.

In 2007, permits were also obtained to drill and test two deep groundwater wells on the Aquabella site pursuant to Riverside County Department of Health Permit No. 33248. Well No. 1 provides for pumping at a rate of 1,500 gallons per minute and Well No. 2 at a rate of 450 gallons per minute. This additional water source can and would be used in implementing and maintaining the Project's lake features. The West San Jacinto Basin Groundwater Sustainability Plan has confirmed that the Moreno Valley area is not currently in overdraft, and groundwater water levels have increased in the area since the 1970s.

In 2011, as approved as part of the 2005 Aquabella SPA, Nason Street, which traverses the Aquabella site, was realigned and widened to a four-lane divided roadway. Nason Street was a crucial capital improvement project for the City. The roadway right-of-way was dedicated to the City through the Aquabella site to assist in implementing this realignment and widening project. Other roadway improvements were completed along Cactus Avenue.

2.2 Setting and Planning Context

2.2.1 Project Location

The Project site (consisting of 668.6 acres) is located in the City, which is within the northwestern portion of the County of Riverside in the southern Inland Empire. The County of Riverside includes 28 cities and unincorporated land areas that are home to a current total population of approximately 2,418,185 people (U.S. Census Bureau 2020).

The City is a growing community of approximately 208,289 residents (DOF 2023). The City is bordered by the City of Riverside to the west, the City of Perris to the south, and unincorporated Riverside County to the north, southwest, and east. The City is bounded by the Box Springs Mountains to the north, the Badlands to the east, and the mountains of the Lake Perris State Recreation Area, Mystic Lake floodplain, and San Jacinto Wildlife Area to the south. West of the City limits lies the March Air Reserve Base and urban areas of the City and County of Riverside (Figure 2-1, Regional Location Map).

The Project site is located east of Interstate 215, south of State Route 60, and north of Lake Perris. More specifically, the Project site is situated on Cactus Avenue and Nason Street, east of Lasselle Street, north of Iris Avenue, west of Oliver Street, and south of Brodiaea Street. The Project site is composed of nine parcels (Assessor's Parcel Numbers 486-280-056, 486-300-012, 486-300-013, 486-310-014, 486-310-035, and 486-320-009 through 486-320-012). The Project's location is shown in Figure 2-2, Project Site.

The Project site is approximately 2.5 miles from the approved World Logistics Center Project, a 2,600-acre logistics warehouse campus anticipated to provide 20,000 to 30,000 jobs to the local area. Demand for warehousing and logistics continues to be high throughout the City and the Inland Empire region. With transportation connections that link it to the Los Angeles/Inland Empire corridor, the City is at the heart of a regional goods movement corridor (City of Moreno Valley 2021).

The Project site is also situated between two major medical campuses. Adjacent to the Project site to the north is the approximately 63-acre, 439-bed, 520,000-square-foot Riverside University Health System Medical Center. To the southeast, the 30-acre Kaiser Permanente Moreno Valley campus is undergoing modernization and expansion to provide approximately 460 beds and 1,125,000 square feet of medical services and ancillary uses. Together, these two medical facilities employ more than 4,900 people with plans for expansion (City of Moreno Valley 2021).

In addition, the Project area is home to educational institutions. The University of California, Riverside, located approximately 8 miles north of the Project site, has a current enrollment of 26,847 students. Only about 30% reside on campus. The University of California, Riverside, campus's Long-Range Development Plan forecasts that by 2035 student enrollment will be 35,000 and the campus will have 14,000 student beds (UCR 2021). Faculty and staff are expected to grow to more than 7,000 people by 2035. The 2021 Long-Range Development Plan plans for up to 5.5 million gross square feet of new building space by 2035 (UCR 2021).

Moreno Valley College, a community college located 1 mile south of the Project site, had total student enrollment of over 15,000 full- and part-time students in 2022. The college also employs more than 500 people, including faculty (Moreno Valley College 2023). It does not offer housing. Consequently, a substantial demand is projected to exist for workforce, multifamily, and student/faculty/employee housing in the Project area.

The City also features two regional shopping centers, as well as 40 neighborhood-serving commercial centers and over 200 restaurants; however, according to the City of Moreno Valley General Plan 2040 (2040 General Plan), a "large share of the City's retail is located within older, strip and neighborhood-style retail centers of relatively low density" (City of Moreno Valley 2021). As the City's population increases, the 2040 General Plan projects "there will be opportunities to introduce high quality, lifestyle retail centers at well placed nodes in the City," along with mixed-use developments with on-site housing providing added support to adjacent retail (City of Moreno Valley 2021).

There are more than 30,000 acres of recreational open space in the region surrounding the City. These areas are proximate to the Project site and provide opportunities for hiking, bicycling, rock climbing, camping, picnicking, and water sports (City of Moreno Valley 2021).

The Project is intended to help meet the varying demands for housing, retail, entertainment, and recreation within the geographic "center" of the City.

2.2.2 Existing Land Uses

On Site

The Project site is currently vacant. The majority of the site (65%) has been graded for development consistent with the original SP 218 and 2005 Aquabella SPA approvals. As discussed in Section 2.1.3, infrastructure improvements have been completed on the site, which include completion of Nason Street, improvements along Cactus Avenue, completion of a flood control channel and a riparian buffer area, completion of a storm drain system, and installation of groundwater wells on site.

Surrounding

As discussed above in Section 2.2.1, the Project site's surrounding area is urbanized with a variety of residential densities, education, medical, and other uses. The Riverside University Health System Medical Center, a public teaching hospital, is along a portion of the Project site's northern boundary, and the Kaiser Permanente Hospital and medical complex is along a portion of the site's southern boundary. Moreno Valley College is directly south of the Project site. The two hospitals and college have recently expanded or have plans to expand in the near future.

Approximately 1 mile from the Project site's southern boundary is the Lake Perris State Recreation Area, which comprises 8,800 acres including the 1,800-acre Lake Perris. This recreational area provides a myriad of recreational activities, including camping, picnicking, fishing, swimming, water sports, and boating opportunities.

2.2.3 Existing General Plan Designations

On Site

Figure 2-3, 2040 General Plan Land Use Designations, and Figure 2-4, Zoning Designations, depict the current General Plan land use and zoning designations of the Project site. The 2040 General Plan Land Use and Community Character Element designates the central Project site as Downtown Center (DC), Aquabella Specific Plan.[1] This DC designation allows for a vibrant mix of business, entertainment, residential, cultural, and civic uses to activate the Downtown Center throughout the day and into the evening. The vitality of commercial and retail development downtown is envisioned to be supported by significant new housing in and adjacent to the Downtown Center. The 2040 General Plan envisions the integration of the Project site into the Downtown Center, allowing for development of supportive multifamily housing, facilities, services, hotel and associated visitor-serving uses, and shops oriented to hospital staff, patients, and their families adjacent to the existing hospital campuses. There are no minimum or maximum residential allowable densities in the Downtown Center per the 2040 General Plan, Land Use & Community Character Element. The element does, however, contain Table LCC-3, which provides an illustrative development program for the Downtown Center (City of Moreno Valley 2022).

The 10.0-acre area along the eastern site boundary would be added to the Project site. It is currently designated Residential 5 (R5) under the 2040 General Plan. The primary purpose of areas designated R5 is to provide single-family detached housing on standard sized suburban lots, with a maximum allowable density of 5.0 dwelling units per acre. This area also permits parks and recreation uses under the Moreno Valley Municipal Code, Title 9, Section 9.02.020, Permitted Uses (R5 Residential). State law would also allow the siting of public schools in these areas pursuant to Government Code Section 53094.

Surrounding

The 2040 General Plan Land Use & Community Character Element designates the area adjacent to the Project site to the north as DC and R5 (5 units/acre); to the east as DC, R5, Residential 2 (R2; 2 units/acre), Public, and Open Space; to the south as Residential 10 (R10; 10 units/acre), R5, Public, and Open Space; and to the west as R5 and R10. Figure 2-3 depicts the urbanized land uses surrounding the Project site.

[1] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (*Sierra Club v. City of Moreno Valley, et al*., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan, and describes the land use and zoning designations of the site and surrounding area under the 2006 General Plan.

2.2.4 Existing Zoning Designations

On Site

The City Zoning Map designates the central portion of the Project site as Downtown Center-Specific Plan (DC-SP), SP 218, indicating its zoning is Downtown Center and SP 218 (City of Moreno Valley 2022). A floating zone designation of Downtown Center–Planned Unit Development (DC-PUD) is also assigned to the Project site, indicating a general area within which a planned unit development could be located to designate dense housing closer to Nason Street and less dense housing on the periphery of the Downtown Center. This floating designation is not required, nor does it preclude development or uses that would otherwise be permitted within the Downtown Center. The Project does not propose to use the 2040 General Plan's floating DC-PUD designation. There is no residential zoning density minimum or maximum, nor are there any height limitations associated with the DC zone.

The 10.0-acre parcel along the eastern boundary is zoned as Residential 5 (R5) District. The primary purpose of areas designated R5 is to provide single-family detached housing on standard sized suburban lots, with a maximum allowable density of 5.0 dwelling units per acre.

Surrounding

The Zoning Map designates the area adjacent to the Project site to the north as DC and R5; to the east as DC, R5, Residential Agriculture 2 (RA2), Public Facilities, and Open Space/Park; to the south as R5, Suburban Residential (SP 193 ML), Public Facilities, and Open Space/Park; and to the west as R5. Figure 2-4 shows the various urban zoning designations surrounding the Project site.

2.2.5 Municipal Code

The Project is prepared under the authority of California Government Code Sections 65450–65457 and the City's Municipal Code Section 9.13, Specific Plans. Specific Plans may be prepared for "the systematic implementation of the General Plan" under these provisions. Government Code Section 65451 governs content and requires Specific Plans to include text or diagrams that specify the following:

1. The distribution, location, and extent of land uses including open space
2. The distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities to support the land uses
3. Standards and criteria by which development will proceed and standards for the conversion, development, and use of natural resources
4. A program of implementation measures including regulations, programs, public works projects, and financing measures necessary to carry out the Specific Plan
5. A statement of the relationship of the Specific Plan to the General Plan

Pursuant to the City's Municipal Code Section 9.13, Specific Plans, the Planning Commission or the Community Development Department may, with concurrence of the City Council, or if so directed by the City Council, initiate the preparation of specific plans based upon the general plan and shall draft such regulations and programs as deemed necessary. Publicly and privately initiated specific plan applications shall be processed by the Community Development Department and be scheduled for public hearing by the Planning Commission for recommendation

to the City Council (Ord. 694 Section 1.1, 2005; Ord. 475 Section 1.4, 1995; Ord. 359, 1992). Chapter 9.13 of the Municipal Code outlines requirements for all specific plans and the procedure for the adoption or amendment of a specific plan.

2.3 Existing Physical Site Conditions

2.3.1 Land Use

As discussed above, the land use designation of the Project site is mainly DC, Aquabella Specific Plan, under the 2040 General Plan. The 10.0-acre parcel (designated R5) along the eastern site boundary is proposed to be added to the Project site.

The existing physical land use of the Project site is vacant land. The site has been graded as part of the previously approved 2005 Aquabella SPA, as well as improved with certain infrastructure. The internal roadway Nason Street has been developed north-to-south in the eastern half of the Project site. A flood control channel and adjacent riparian buffer have been developed in the southeast portion of the site. Two groundwater wells have been installed on the Project site.

2.3.2 Aesthetic/Topographical Features

The Project site is generally flat with elevations ranging from 1,490 feet to 1,560 feet above mean sea level. The site has experienced substantial disturbance from historical agricultural activities and previous grading that has occurred across the entire site over the past two decades. In several areas, shallow basins have formed as a result of the initial grading of the site, particularly in association with contouring for a planned artificial lake feature and on flat graded pads that are found across the site where soil compaction allowed for shallow depressions to occur.

2.3.3 Air Quality and Climate Condition

The air quality at the Project site is influenced by topographical and metrological conditions. The Project site is located approximately 40 miles northeast of the Pacific Ocean, between the topographic features of the Santa Ana Mountains and the San Jacinto Mountains. The Project site experiences a Mediterranean climate characterized by warm, dry summers and mild, wet winters. Average annual rainfall is 8 to 10 inches and annual temperatures range from an average low of 36°F to an average high of 93°F (City of Moreno Valley 2021).

The Project site is located within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District. The 6,745-square-mile basin encompasses Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties and is bounded by the Pacific Ocean to the west, the San Gabriel Mountains to the northwest, the San Bernardino Mountains to the northeast, the San Jacinto Mountains to the east, and San Diego County to the south. The South Coast Air Basin is designated as in attainment or unclassifiable attainment (expected to be meeting the standard despite a lack of monitoring data) for all federal air quality standards except 8-hour ozone and 2.5-micron particulate matter standards. The basin is designated as in nonattainment for state air quality standards for 8-hour ozone, 2.5-micron particulate matter, and 10-micron particulate matter (City of Moreno Valley 2021).

2.3.4 Known Cultural Resources and Tribal Cultural Resources

A cultural resources inventory of the Project site indicates that there is a low sensitivity for identifying intact subsurface cultural resource deposits during Project implementation. A records search did not identify any cultural resources within the Project area (the Project site plus a buffer area). Due to the historic agricultural activity on site and the other ground disturbing activities that have occurred on site, any archaeological resources that were present would have been disturbed and would no longer remain intact.

2.3.5 Existing Geology and Soils

The Project site is located in San Jacinto Valley of western Riverside County in the Peninsular Ranges geomorphic province. San Jacinto Valley lies between the San Jacinto Mountains to the east and the Santa Ana Mountains to the west. The northern part of the Peninsular Ranges geomorphic province, where the Project site is located, is between the Elsinore Fault Zone and San Jacinto Fault Zone, within a geologically complex region of Southern California. The Peninsular Ranges province lies in the southwestern most region of California and extends south 775 miles past the United States/Mexico border. It is bounded by the Transverse Ranges to the north, the Colorado Desert to the east, and the Pacific Ocean to the west. The province is characterized by a series of northwest-trending, fault-bound mountain ranges separated by long, broad valleys. The Project site is located on what is known as the Perris Block, which is a structurally stable block bound to the west by the Chino and Elsinore Fault Zones and the Elsinore Trough, to the east and northeast by the San Jacinto Fault Zone, to the north by the Cucamonga Fault, and the to the south by the San Felipe Fault Zone.

The Project site is underlain by relatively young alluvial fan and alluvial valley deposits and very old alluvial fan deposits. The northeast portion of the site is underlain by young alluvial fan deposits, which are characterized by gray sand, cobble, and gravel deposits (Morton et al., 2002, as cited in Appendix C, Geotechnical Evaluation). The western, central, and southeast portions of the site are underlain by very old alluvial fan deposits. These deposits have been described as mostly well-indurated (solidified), reddish-brown sand deposits containing minor gravel. In the central southern portion of the site, mainly south of the concrete-lined drainage channel, the site is underlain by young alluvial valley deposits, which are characterized by gray, unconsolidated, silty to sandy alluvium deposited on valley floors (Morton et al., 2002, as cited in Appendix C). Intermittent deposits of undocumented fill related to past agricultural activities are also present on site.

2.3.6 Hydraulic Conditions

The Project site is located within the San Jacinto River Watershed, which drains a 732-square-mile area of the western half of Riverside County. The headwaters of the San Jacinto River are in the San Jacinto Mountains; the river runs through the Railroad Canyon Reservoir (Canyon Lake), which occasionally discharges into Lake Elsinore. The Santa Ana Regional Water Quality Control Board, among various other agencies, regulates water quality within the Santa Ana Region. Water quality objectives, plans, and policies for the surface waters within this region are established in the Santa Ana Region Basin Plan, which has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. Stormwater at the Project site ultimately drains to the San Jacinto River, which has intermittent beneficial uses that include agricultural water supply, groundwater recharge, contact/non-contact recreation, warm freshwater habitat, wildlife habitat, and threatened or endangered species habitat (SWRCB 2019). The Riverside County Flood Control and Water Conservation District has prepared four master drainage plans and the Project site is located within the Moreno Master Drainage Plan (Riverside County Flood Control District 2023).

The Project site is situated over the San Jacinto Groundwater Basin. Groundwater elevations in the area of the Project site's subbasin, known as the Moreno Valley Production Area, vary with geographic location. They are highest in the northeastern part of the production area and lowest adjacent to the Bernasconi Hills. Historically, groundwater in the San Jacinto Groundwater Basin has been of sufficient quality for domestic, irrigation, and industrial purposes. Historical and ongoing agricultural land use is the principal non-point source of groundwater quality degradation within the basin. Agricultural practices have resulted in elevated concentrations of salt and nutrients (nitrogen and phosphorous).

2.3.7 Noise Sources in the Project Vicinity

The Project site is subject to typical urban noises such as those generated by traffic, heavy machinery, and day-to-day outdoor activities. Noise around the Project site is the cumulative effect of noise from transportation activities and stationary sources. "Transportation noise" typically refers to noise from automobile use, trucking, airport operations, and rail operations. "Stationary noise" typically refers to noise from sources such as heating, ventilation, and air-conditioning systems; compressors; landscape maintenance equipment; and machinery associated with local industrial or commercial activities.

The Project site is primarily subject to traffic noise associated with Iris Avenue to the south and, secondarily, traffic on Oliver Street, which is approximately 600 feet east of the Project site.

Ambient noise measurements were conducted to determine the existing noise levels at the Project site. Seven noise measurement locations (ST1 through ST7) that represented nearby potential sensitive land uses were selected adjacent to or near the Project site. The primary noise sources at the measurement locations were from traffic along adjacent roads and driveways.

2.3.8 Transportation Conditions

Regional access to the Project site is provided by Interstate 215 (north–south) and State Route 60 (east–west). Access to the Project site is provided by Cactus Avenue, Oliver Street, John F Kennedy Drive, Iris Avenue, Lasselle Street, Nason Street, and Morrison Street. Within the Project vicinity, Cactus Avenue, Oliver Street, and John F Kennedy Drive to the east are categorized as minor arterials. John F Kennedy Drive to the west, Lasselle Street, and Morrison Street are arterial roadways. Iris Avenue, to the south of the Project site, is a divided major arterial roadway. Nason Street, which extends through the Project site in a north-to-south direction, is a divided arterial roadway (City of Moreno Valley 2021).

2.3.9 Existing Utilities and Service Providers

Eastern Municipal Water District provides potable water, recycled water, and wastewater services for the City and the Project site. Stormwater within the City is jointly managed by the Riverside County Flood Control District and Water Conservation District and the City. Waste Management of Inland Valley (Waste Management) provides solid waste, recycling, composting, and special waste handling services within the City. Waste Management provides trash, recycling, and green waste pickup for residential customers and business customers. The Project area is served by two separate landfills: Badlands Landfill and Lamb Canyon Landfill. The only contract hauler within the City is Waste Management. The Project site is located within the service area for Moreno Valley Electric Utility and Southern California Gas Company. Telecommunications services to the Project site may be provided by various distributors. Current communications and internet providers within the City include Frontier, Spectrum, and AT&T.

2.3.10 Vegetation

The majority of the Project site is disturbed habitat, non-native grassland, or urban/developed land. A total of 81 species of plants have been observed on site. Two vegetation communities identified as high priority were identified by the California Department of Fish and Wildlife: *Populus fremontii–Salix laevigata/Salix lasiolepis–Baccharis salicifolia* association and the *Salix gooddingii/Baccharis salicifolia* association. There are 17 plant families represented on site, with more than half of the species coming from the *Asteraceae*, *Poaceae*, and *Fabaceae* families. Species composition on the Project site includes 46 (57%) native species and 35 (43%) non-native species. An area of protected riparian vegetation is located adjacent to the constructed flood control channel running diagonally across the southeastern portion of the Project site.

2.3.11 Wildlife

The upland and riparian communities within the Project site provide foraging, breeding, and shelter habitat for a variety of common and special-status amphibian, reptile, bird, mammal, and invertebrate species. There were 80 wildlife species detected on the Project site during wildlife surveys in 2022 and 2023 (see Section 4.4, Biological Resources, for a comprehensive list of observed wildlife species).

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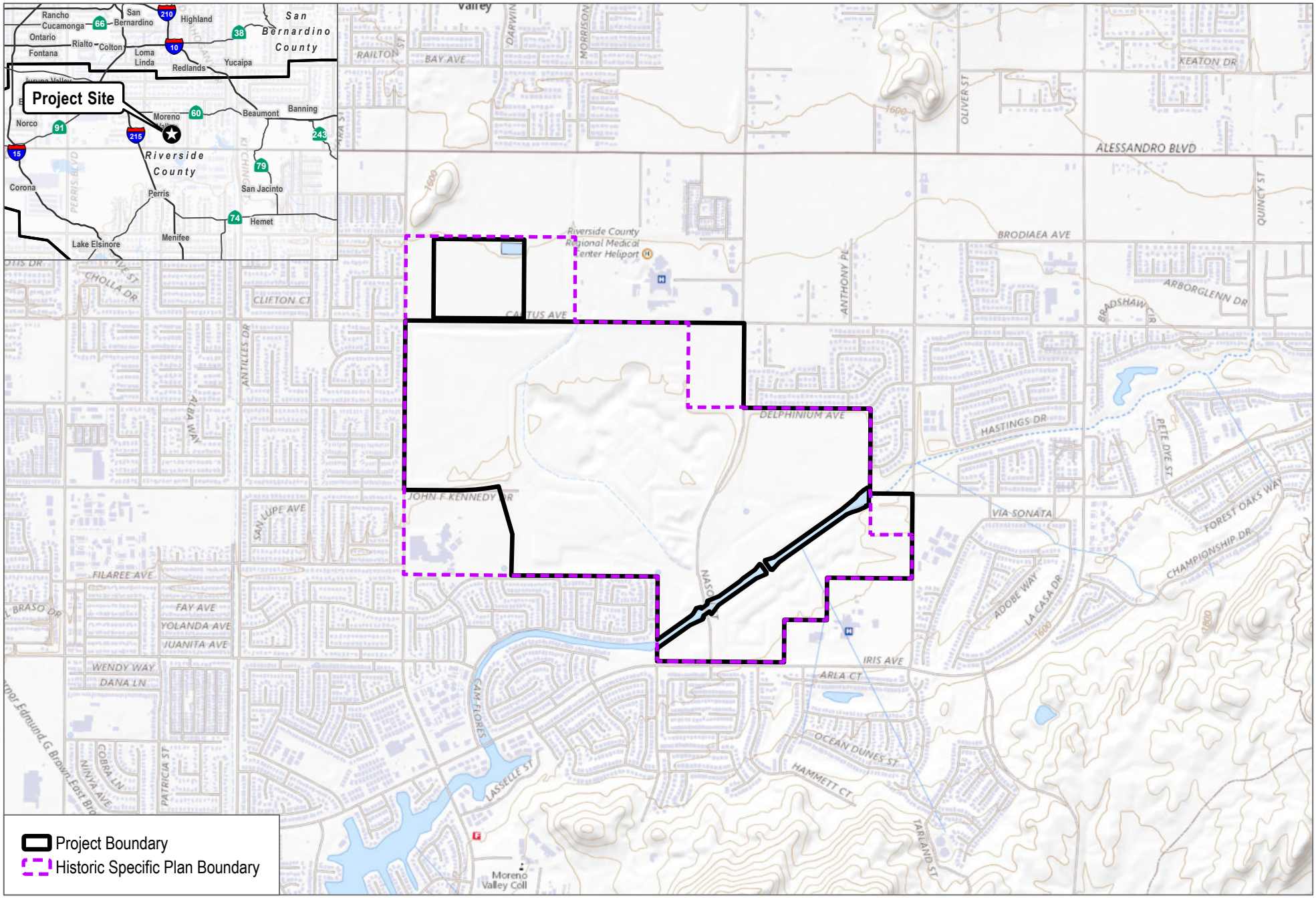

SOURCE: USGS National Map 2024

Sunnymead Quadrangle - Township 3S Range 3W Sections 15, 16, 21, 22

DUDEK

0 500 1,000 Feet

FIGURE 2-1

Project Location

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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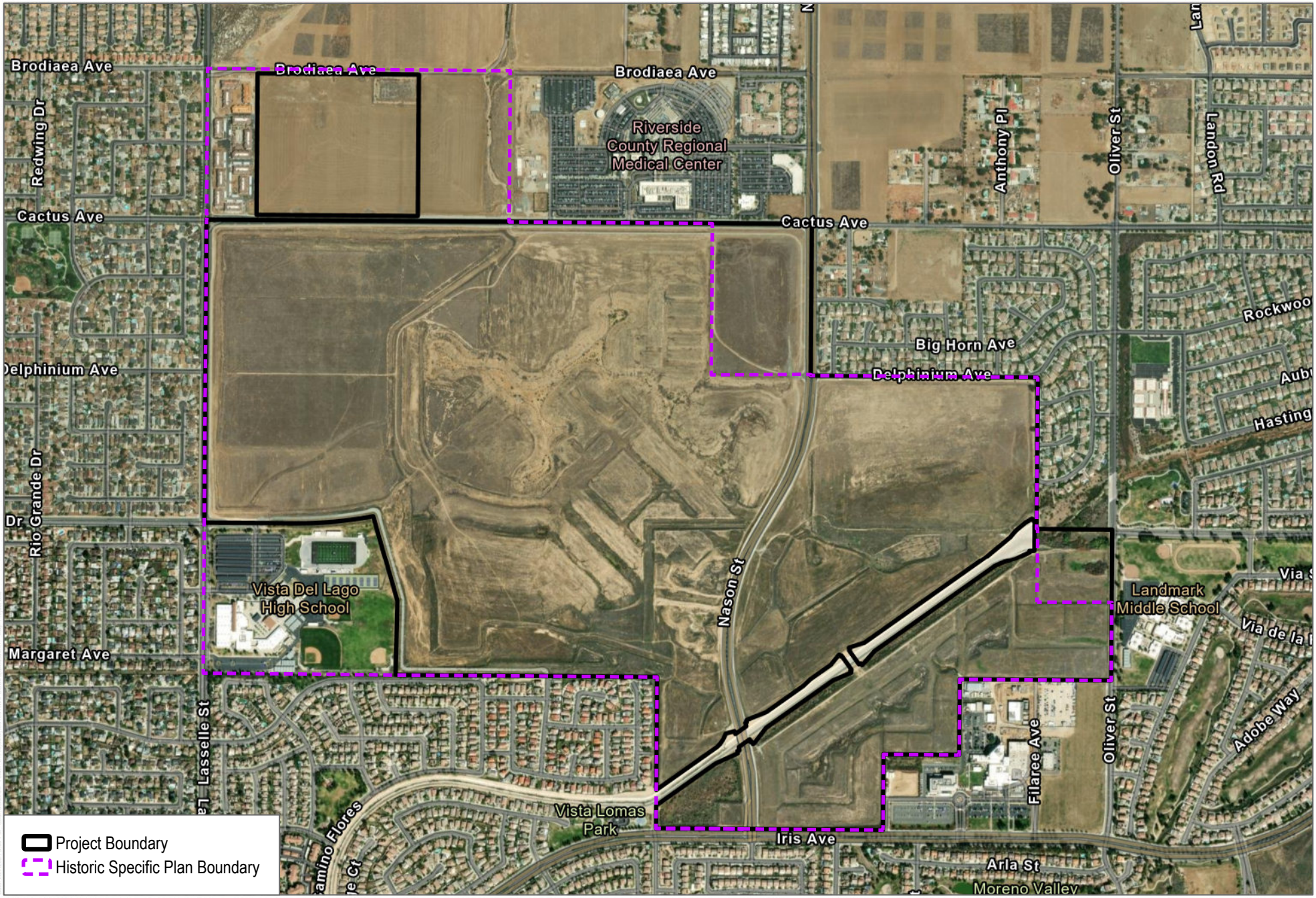

SOURCE: Maxar 2022

DUDEK

0 500 1,000 Feet

FIGURE 2-2

Project Site

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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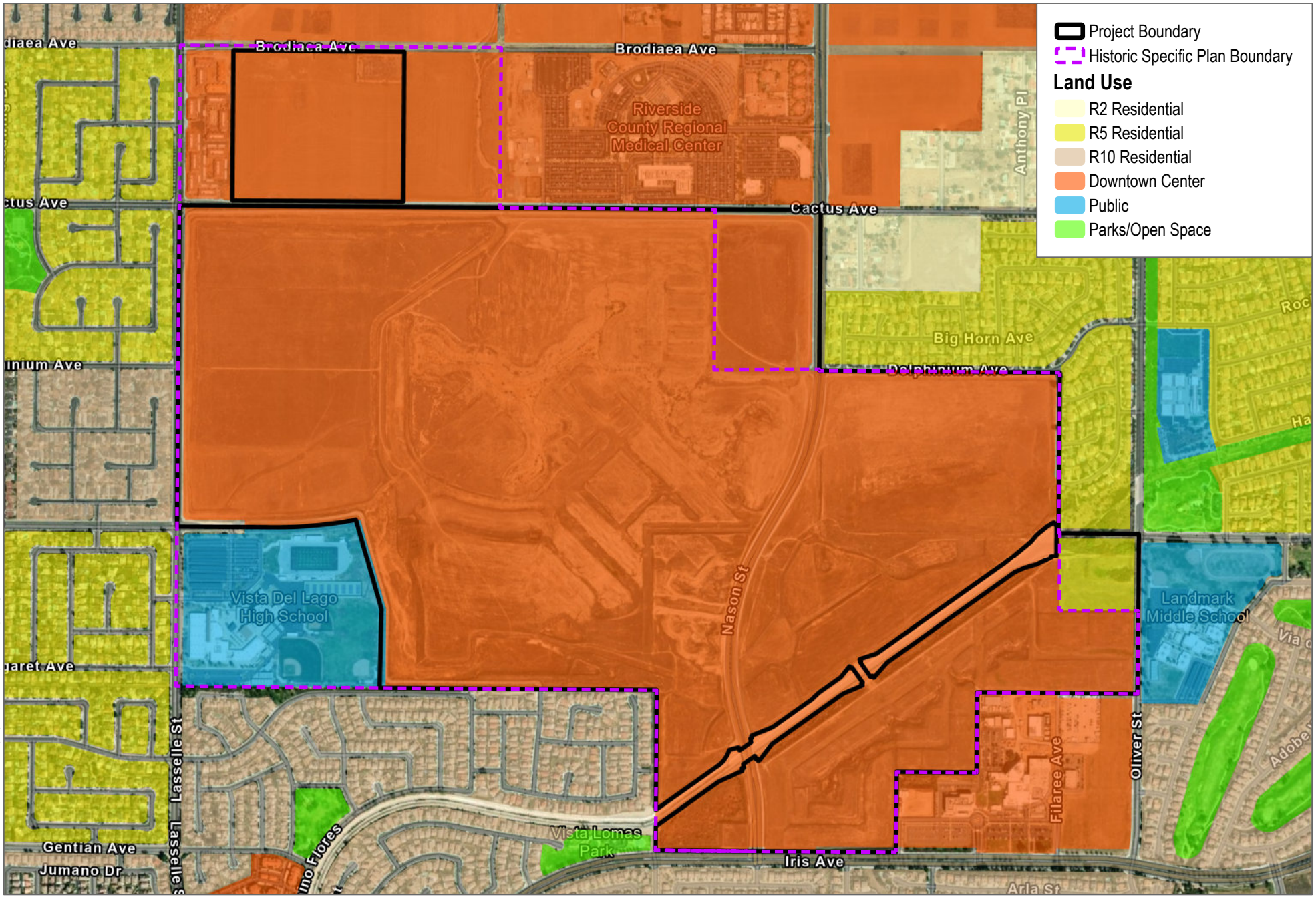

SOURCE: Maxar 2022; SCAG Land Use 2016

DUDEK

0 500 1,000 Feet

FIGURE 2-3

Existing Land Use

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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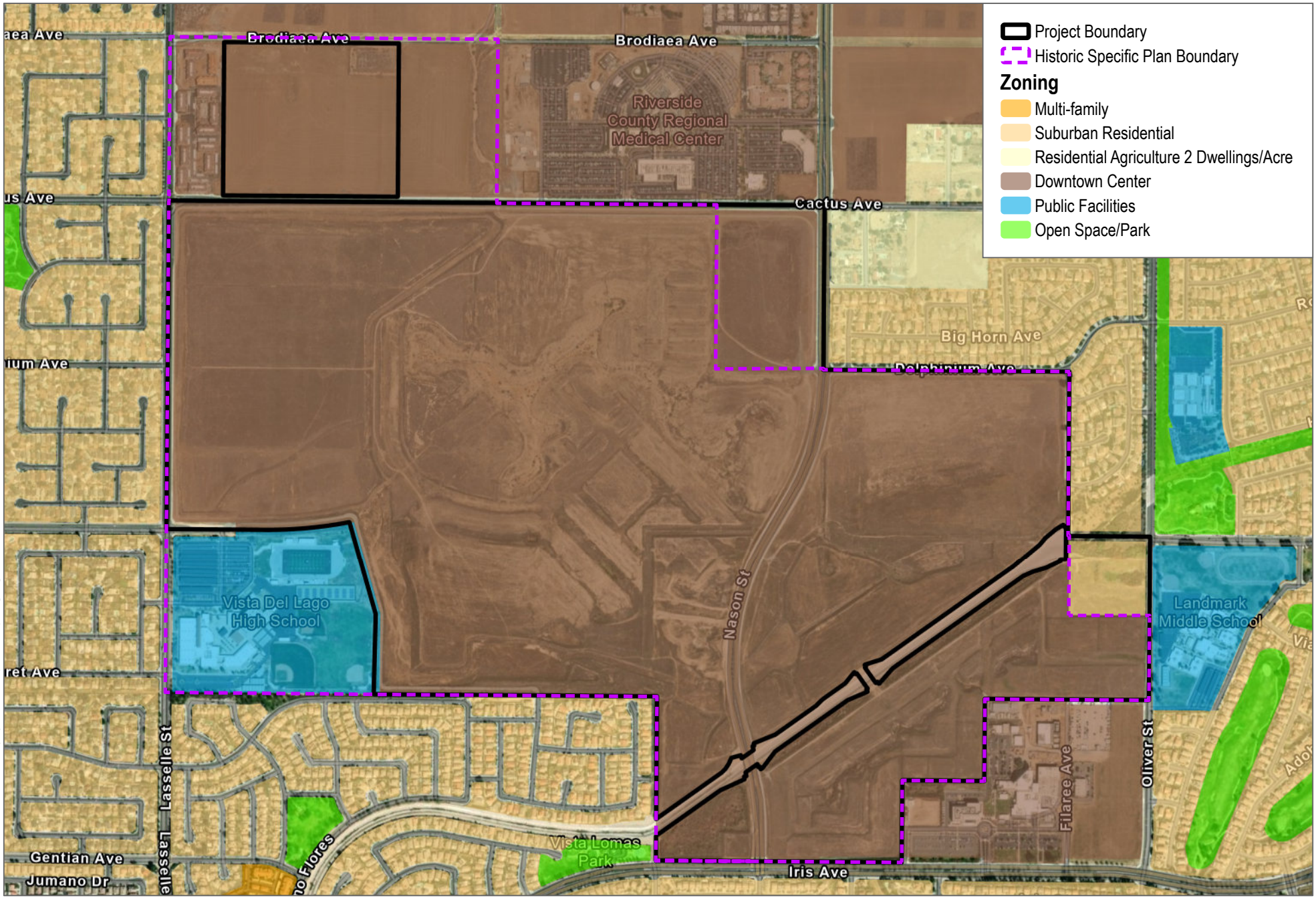

SOURCE: Maxar 2022; MoVal GIS 2023

DUDEK

0 500 1,000 Feet

FIGURE 2-4

Existing Zoning

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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3 Project Description

This section describes the proposed Aquabella Specific Plan Amendment Project (Project) in a manner that will be meaningful to the public, stakeholders, reviewing agencies, and decision makers. For purposes of the California Environmental Quality Act (CEQA), a complete project description must contain the following information: (a) the precise location and boundary of the proposed location shown on a detailed map, along with a regional map of the project's location; (b) a statement of the objectives sought by the proposed project, which should include the underlying purpose of the project and may discuss the project benefits; (c) a general description of the project's technical, economic, and environmental characteristics; and (d) a statement briefly describing the intended uses of the environmental impact report (EIR), including the list of agencies expected to use the EIR in their decision making, a list of permits and other approvals required to implement the project, and a list of related environmental review and consultation requirements imposed by federal, state, or local laws, regulations, or policies (CEQA Guidelines Section 15124). The project description should not provide extensive detail beyond that necessary for the evaluation and review of the project's significant effects on the environment.

This section describes the Project, including its location and characteristics, as well as the Project's objectives and the intended uses of this Subsequent EIR (SEIR).

The Project would comprehensively update the previously approved 1999 Moreno Valley Field Station Specific Plan (original SP 218) and the 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA). The original Specific Plan Area as approved in the original SP 218 encompassed 770.2 acres. Since this time, individual parcels have been developed or sold, As such, the Project updates the vision for the development of the remaining 658.6-acre site, plus an additional 10-acre parcel that will be added to the Project site, for a total area of 668.6 acres. The Project provides comprehensive plans and a new vision to guide the continued implementation of the Specific Plan and bring significant public benefits, housing, and economic benefits to the City of Moreno Valley (City) and the region. The Project's Specific Plan Amendment (Appendix A to this SEIR) contains the updated land use and other plans, site development standards, design guidelines, and implementation measures necessary to implement the new vision for the Aquabella residential and mixed-use planned community. As described further in this chapter, the Project site analyzed herein is 668.6 acres and would include land use and other changes to accommodate 15,000 multifamily and workforce housing options for all ages and income levels, a 49,900-square-foot mixed-use commercial and retail Town Center with a 300-room hotel; approximately 80 acres of parks, composed of a 40-acre lake system, a 15-acre lake promenade encircling the lake, and an additional 25 acres of active parkland; approximately 40 acres of schools with up to three elementary school sites and one middle school site; public services and facilities; infrastructure improvements; and other amenities.

The Project site's primary circulation spine roads (Nason Street and Cactus Avenue), master drainage, and master flood control improvements already have been completed. Under prior project approvals, a 50-acre high school (Vista del Lago High School) was completed southwest of the site, and a 220-unit market rate, multifamily apartment complex was built on the 11-acre parcel to the northwest of the site. These parcels are not part of the Project.

The Project, while implementing a new vision, also maintains many of the site's previously approved features, including the 40-acre lake; the 15-acre lake promenade, parks, and trails; and commercial uses and the 300-room hotel. The Project's primary land use changes consist of the creation of an innovative Town Center with 15,000 multifamily housing unites, in lieu of the former approvals of a gated, active-adult community of 2,922 detached and attached units, of which 2,702 units were age-restricted. The Specific Plan Amendment also

adds a 10.0-acre parcel to the Project site along the eastern boundary of the site, which would be proposed for Specific Plan development and a school location.

3.1 Project Location

The Project site is located in the southeastern portion of the City of Moreno Valley, a city of 208,289 residents (as of 2023) in the western portion of Riverside County, within the southern Inland Empire region of California (see Figure 3-1, Project Location). The Project site is irregularly shaped and located east of Interstate 215, south of State Route 60, and north of Lake Perris. The Project site is bounded by Cactus Avenue and Brodiaea Avenue to the north, Iris Avenue to the south, Lasselle Street to the west, and Oliver Street to the east (see Figure 3-2, Project Site). The Project site is in Sections 15, 16, 21, and 22 of Township 3 South, Range 3 West on the U.S. Geological Survey Sunnymead 7.5-Minute Quadrangle.

The Project site is composed of nine parcels (Assessor's Parcel Nos. 486-280-056, 486-300-012, 486-280-013, 486-310-014, 486-310-035, and 486-320-009 through 486-320-012) containing a total of 668.6 acres across relatively flat land. Approximately 437 acres (65%) of the Project site has been graded. The Project site is divided into Planning Areas with similar development patterns, referred to as PA 1 through PA 5 (see Figure 3-2).

3.2 Statement of Project Objectives

Section 15124(b) of the CEQA Guidelines requires an EIR to include a statement of objectives for the proposed project. The objectives should also describe the underlying purpose of the proposed project, which assists in the development of reasonable project alternatives.

This statement of project objectives has been established for the Project. The overall Project purpose is to continue to implement the Aquabella Specific Plan, as modified, as a vibrant residential and mixed-use planned community consistent with the City of Moreno Valley General Plan 2040 (2040 General Plan) goals and objectives. Through the 2040 General Plan (adopted June 15, 2021), the City created its vision and guiding principles to respond to new economic, technological, social, demographic, regional, and global challenges and opportunities that have arisen over time.[1]

[1] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (*Sierra Club v. City of Moreno Valley, et al.*, Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

With this purpose in mind, the fundamental objectives for the proposed Project are as follows:

1. Create a residential and mixed-use planned community framework within the center of the City that contributes to a distinct downtown center core consistent with the General Plan.
2. Provide a broad mix of multifamily residential housing options for all ages and income levels within the center of the City to address the needs of the City's existing and future residents, including those employed by adjacent and proximate health care, education, and logistics fields, in order to reduce long commutes to other distant job centers, achieve a better jobs-to-housing balance, and facilitate housing and job growth in central Moreno Valley.
3. Focus new residential, mixed-use, and retail/commercial uses within the City's Downtown Center and provide inviting uses to build Moreno Valley's sense of place, promote visitor-serving uses (e.g., Town Center, hotel), and take advantage of the site's sustainable lakes, lake promenade, and other amenities.
4. Utilize currently undeveloped land situated within the center of the City to foster vibrant gathering places, diversify the local economy, and implement livable sustainable mixed-use neighborhoods where people can live, work, recreate, and shop.
5. Implement the delivery of efficient public facilities and services (e.g., schools, parks, trails, police/fire), support frequent and reliable transit service and other multi-modal transportation measures, promote walking and biking, and reduce vehicle miles travelled by taking advantage of a site approximating the size and scale of the previously adopted Aquabella Specific Plan.
6. Focus on maintaining and enhancing an efficient transportation network within central Moreno Valley, including automobile travel, transit, pedestrian and bicycle routes, car/van pools, electric vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and shuttles to adjacent and proximate major job centers (e.g., Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, and the World Logistics Center).
7. Maintain and strengthen the quality of life in central Moreno Valley with quality schools, parks, multi-use trails, responsive public services, and reliable utility infrastructure.
8. Assist the City with its local and regional housing needs.

3.3 Project Characteristics

To keep pace with the current and future area housing needs and implement the City's objectives to create a vibrant economic and social core within the center of the City, the Project proposes a second Specific Plan Amendment (Appendix A). The proposed Specific Plan Amendment would continue to develop the remaining 668.6 acres of the Aquabella site with 15,000 multifamily residences; 49,900 square feet of supporting commercial and retail uses, including a 300-room hotel; approximately 80 acres of parks (40 acres of lakes, plus a 15-acre lake promenade and 25 acres of additional parks); approximately 40 acres of elementary school and middle school sites; open space; public services and facilities; and other amenities. The Project responds to the substantial demand for multifamily and workforce housing options, while providing a central Town Center for recreation, shopping, and entertainment. Figure 3-3, 2024 Land Use Plan, depicts the proposed land use plan for the Aquabella site.

3.3.1 Previous Project Scope

The Project site has been long planned for residential mixed-use development, though discussion of how the property will be best utilized has changed over the years. On February 23, 1999, the City approved the Moreno Valley Field Station Specific Plan No. 218 for the site and certified an EIR (State Clearinghouse Schedule No. 93113076) (1999 EIR) for 2,922 single-family residential units, a 148.7-acre public golf course, 80.5 acres of schools, and 51.1 acres of parks for the then 760-acre site (see Table 3-1). Thereafter, in 2003, the City certified the Moreno Valley Field Station Specific Plan Final Supplemental EIR (State Clearinghouse Schedule. No. 1993112076) (2003 Supplemental EIR), which addressed concerns raised in a lawsuit regarding traffic, biological mitigation, land use, and alternatives.

In December 2005, the City adopted the first Specific Plan Amendment for the Aquabella site and approved an Addendum to the EIR in compliance with CEQA (2005 Addendum). In response to a demand for senior housing and because the proposed golf course was no longer feasible due to another golf course in the vicinity, the 2005 Aquabella SPA modified the original SP 218 to be a proposed age-restricted active-adult resort community composed of 2,922 residential units, 2,702 of which would be age-restricted homes; eliminated the schools (except for the developed high school); planned for a 300-room hotel; planned for 25 acres of office/commercial uses; and replaced the previously approved golf course with 40 acres of lakes (see Table 3-1). The residential use proposed 40% multifamily residential uses and 60% detached single-family residential uses. PA 2, composed of approximately 11 acres, was designated for 220 high-density attached multifamily housing units, with no age restriction.

To date, the City's prior approvals have resulted in the improvements across approximately 516 acres within the 2005 Aquabella site. Figure 3-4, Previously Disturbed Land, depicts the on-site grading and land disturbance to date. The grading and development consists of (a) the completion of the 50-acre Vista del Lago High School, (b) the completion and occupancy of a 220-unit multifamily apartment complex in PA 2, (c) the realignment and expansion of Nason Street through the Project site, (d) Cactus Avenue improvements, (e) master drainage and flood control improvements to accommodate future uses, (f) grading of the lake areas, and (g) installation of groundwater wells (see Figure 3-5, Project Site Improvements). See Chapter 2, Environmental Setting, for a detailed Project history.

Table 3-1. Specific Plan Land Use Statistical Summary

Land Use	Approved 1999 Field Station Specific Plan/EIR			Approved 2005 Aquabella Specific Plan Amendment/Addendum			Proposed 2024 Project/SEIR		
	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms
Residential									
Planning Area 1	449	2,922	0	622	2,922	0	39.8	2,000	0
Planning Area 2							418.1	12,000	
Planning Area 3							116.3	5,500	
Planning Area 4							85.3	3,800	
Planning Area 5							9.1	100	
Subtotal:	*449*	*2,922*	*0*	*622*	*2,922*	*0*	*673*	*15,000 maximum*	*0*
Land Use Overlay (1)									
Lake (open space & parkland)	0	0	0	40*	0	0	40*	0	0
Park & Lake Promenade	51	0	0	0	0	0	40*	0	0
Schools (Vista del Lago High School & up to three new locations)	80	0	0	0	0	0	40*	0	0
Town Center/Commercial	24	0	300,000	(PA B) 25	0	300,000/300	25*	0	49,900/ 300
Golf Course	148.7	0	0	0	0	0	0	0	0
Circulation, RCFCWCD Channel	7.3	0	0	23	0	0	30*	0	0
Subtotal:	*311*	*0*	*300,000*	*48*	*0*	*300,000/300*	*0*	*0*	*49,900/ 300*
Total:	**760**	**2,922**	**300,000**	**760**	**2,922**	**300,000/300**	**668.6**	**15,000 maximum**	**49,900/ 300**

Table 3-1. Specific Plan Land Use Statistical Summary

Land Use	Approved 1999 Field Station Specific Plan/EIR			Approved 2005 Aquabella Specific Plan Amendment/Addendum			Proposed 2024 Project/SEIR		
	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms	Acres	Dwelling Units	Commercial Square Feet/Hotel Rooms
Built and Operating Facilities (Acres not included in proposed Planning Areas 1-5)									
RCFCWCD Channel	—	—	—	16	—	—	12	—	—
Planning Area 2 (Villa Annette Apartments of 2005 Plan)	—	—	—	—	—	—	13	—	—
Land Donation to RUHS (Portion of 2005 Plan PA 1)	—	—	—	—	—	—	24	—	—
Existing Vista del Lago High School (PA-A)	—	—	—	50	—	—	50	—	—
Circulation (Nason, Cactus, Delphinium & Laselle St.)	—	—	—	24	—	—	Included in PAs 1-5 plus 3-acre ROW in Broadiaea Ave. & Cactus Ave.	—	—
Grand Total:	**760**	**—**	**—**	**760**	**—**	**—**	**770 (2)**	**—**	**—**

Notes: EIR = environmental impact report; SEIR = subsequent environmental impact report; RCFCWCD = Riverside County Flood Control and Water Conservation District; RUHS = Riverside University Health System; PA = Planning Area.

* Acres included in Planning Area

1 Land use overlays, also referred to as floating land use designations, are intended to indicate a general area within which schools, parks, and the town center/hotel could be located.

2 Increase of 15 acres between 2005 and 2024 Specific Plan Amendments due to addition of area at John F. Kennedy Drive and Oliver Street

3.3.2 Description of the Specific Plan Amendment

Overview

This Project is designed to refresh the land use plan, goals, objectives, development standards, and design guidelines from those described and depicted in the previously approved 2005 Aquabella SPA.

The central elements of the proposed Aquabella Specific Plan Amendment include the redesignation of land for the development of up to 15,000 multifamily and workforce housing dwelling units for all ages and income levels (in lieu of a gated active-adult community with a maximum of 2,922 residential dwelling units); 49,900 square feet of mixed-use commercial and retail Town Center and a 300-room hotel; approximately 80 acres of parks (the previously approved 40-acre lake, a 15-acre lake promenade, and an additional 25 acres of parks); and approximately 40 acres designated for school use with up to three elementary school sites and one middle school site.

The Specific Plan Amendment (Appendix A) is presented in seven chapters (plus a chapter for appendices). An outline and a summary of each chapter is described herein.

Chapter 1, Introduction, provides an overview of this Aquabella Specific Plan Amendment, including an outline of the collaborative vision for the Specific Plan design, a description of the purpose and legal authorization, a discussion of the relationship of the Specific Plan Amendment to the Moreno Valley General Plan and Municipal Code, and a summary of the City's CEQA compliance for the Specific Plan Amendment.

Chapter 2, Project Description, Location and History, provides the Project description, prior project approval history, requested discretionary approvals, location and setting, objectives, and build-out and phasing.

Chapter 3, Planning Framework/Land Use Plan, provides the planning framework, including the land uses, and the mobility plan focusing on motorized and non-motorized transportation design and tools.

Chapter 4, Infrastructure, provides a planning framework for the public services, infrastructure, and other plans (focusing on phasing strategies and major infrastructure systems, including water, sewer, and drainage facilities).

Chapter 5, Development Regulations, provides the required development standards such as building setbacks, objective building criteria, vehicle parking requirements, walls and fence standards, lighting standards, and loading and screening standards.

Chapter 6, Design Guidelines, includes the Specific Plan Amendment's physical design guidelines related to site configuration, the lakes, the lake promenade, parks, and building design.

Chapter 7, Administration and Implementation, provides the process for subsequent project approvals, funding and financing mechanisms, and implementation actions.

Chapter 8 contains the appendices. **Appendices 8.1** and **8.2** provide the analysis of the Specific Plan Amendment's consistency/inconsistency with the Moreno Valley General Plan. **Appendix 8.3** contains the Aquabella Implementation Ministerial Review Checklist.

Introduction and Project Description

The Aquabella Specific Plan Amendment's introduction and project description chapters provide the new vision for the Project (Appendix A). The introduction describes the process to develop the new vision, goals, and objectives, with input from design, planning, and engineering professionals, as well as the community and other Project stakeholders. The Introduction also provides a description of the purpose and legal authority of a specific plan or amendment and how it relates to the proposed Specific Plan Amendment. The Introduction further discusses the relationship of the Specific Plan Amendment to the Moreno Valley General Plan and Municipal Code and provides the existing land use designations and zoning designations on the Project site. Further, the introduction summarizes the previously approved CEQA documents in relation to the 1999 EIR, the 2003 Supplemental EIR, and the 2005 Aquabella SPA.

This chapter identifies the proposed changes to the Specific Plan. It also provides a robust project history, describing the elements of the 1999 EIR and other associated certified CEQA documents, as well as the elements of the Aquabella Specific Plan that have been implemented and developed. Finally, this chapter lists the necessary discretionary approvals and Project phasing and implementation plans.

Table 3-1 provides the Aquabella Specific Plan Amendment's modified land use statistical summary compared to the previously approved land uses.

Planning Framework and Land Use Plan

This chapter of the Specific Plan Amendment (Appendix A) describes the framework for the design, development, and implementation of the Specific Plan Area.

Planning Framework

As Chapter 3 of the Specific Plan Amendment (Appendix A) outlines, development of the Specific Plan Area would occur within five PAs, which are separated by roads or the existing flood control channel. Each PA would be developed into a series of neighborhoods of varying sizes and mixes of housing types. Paseos are planned to connect adjacent neighborhoods, and paseos, trails, and walkways would connect parks and open space throughout the Project site. The following is a description of the geographic location and planned land uses for each Planning Area.

Planning Area 1

This 39.8-acre PA is located north of Cactus Avenue, south of Brodiaea Avenue, and east of the Villa Annette Apartments (a 210-unit apartment complex), northwest of the intersection of Cactus Avenue and Lasselle Street. PA 1 is designated High Density Residential (up to 50 dwelling units per acre) with a Park floating zone.

Planning Area 2

PA 2, the largest PA (418.1 acres), is located east of Lasselle Street, south of Cactus Avenue, west of Nason Street, north of the drainage channel, and south of the Riverside University Health System Medical Center. PA 2 is designated High Density Residential (up to 50 dwelling units per acre) and would contain the majority, if not all, of the lake features and Town Center. PA 2 contains two School floating zones (S), two Park floating zones (P), and the Town Center floating zone (TC). The Town Center would contain the commercial district of the Specific Plan, and while it is anticipated to be developed in PA 2, it could be implemented anywhere in the Specific Plan, and may be

segmented so that portions are located in different PAs. The lake feature would be primarily centered in PA 2, but may also be located in more than one PA.

Planning Area 3

This 116.3-acre PA is located east of Nason Street, south of Delphinium Avenue, west of Evergreen and Oliver Streets, and north of the drainage channel. PA 3 is designated High Density Residential (up to 50 dwelling units per acre) with a Park floating zone (P). PA 3 may also include some of the lake feature.

Planning Area 4

PA 4 is 89.9 acres and is located south of PA 3 and the drainage channel, north of the Kaiser Permanente Moreno Valley campus and Iris Avenue, east of Nason Street, and west of Oliver Street. A total of 67.4 acres of PA 4 are designated High Density Residential (up to 50 dwelling units per acre) and 14.6 acres are designated R5 (up to 5 dwelling units per acre), with a Park floating zone (P) and School floating zones (S) shown at the northeast corner next to the existing Landmark Middle School and two Lake floating zones southeast of the drainage channel. PA 4 also includes 6.9 acres of Open Space southeast of the drainage channel, which comprise existing riparian mitigation.

Planning Area 5

PA 5 is 9.1 acres located at the northwest corner of Iris Avenue and Nason Street. PA 5 is south of the 19-acre drainage channel and includes a portion of the existing riparian mitigation area. 1.9 acres of PA 5 are designated High Density Residential (up to 50 dwelling units per acre) and 6.2 acres are designated Open Space for the existing mitigation area. PA 5 is envisioned as a gateway into the Aquabella community.

Residential

The land use plan consists of High Density Residential, which allows 50 dwelling units per acre; Open Space, which is composed of the existing riparian mitigation areas; and existing roads. Each PA would be developed in a series of villages. A variety of residential housing types would be developed. Residential types may include multilevel garden apartments, row townhomes, duplexes, fourplexes, and courtyard apartments. Further, residential uses may be designed as live/work homes or as housing for students or seniors to meet area needs. There are several housing types to be considered for future development. For example, garden style stacked flats are multifamily dwelling buildings containing a number of dwelling units. A row townhome is a multilevel home that shares walls on one or both sides and typically has ground-level entry. These residences may include a carriage unit above the garage. Duplex homes are multifamily homes containing two units, while fourplexes contain four units. Attached courtyard homes are attached single-family homes on individual lots that are smaller than typical single-family lots. These homes are typically developed in clusters, or pods, and orient towards a common courtyard, which provides vehicular access. Courtyard homes feature an open-air courtyard typically located at the back of the house, around which the home is constructed. Courtyards can also be found at the front of the home, in a side yard or even as a garage entry.

Recreation, Schools, and Commercial

Chapter 3 of the Aquabella Specific Plan Amendment (Appendix A) describes the plan for the development of parks, schools, and commercial/retail uses. The parks and schools are shown on the Specific Plan's Land Use Plan as "P"

and "S," respectively (see Figure 3-3). These symbols represent floating land use designations intended to indicate a general area within which parks and schools could be located. It does not preclude other uses that would otherwise be permitted within the Project site boundary. The specific size, exact location, and configuration of the schools and parks sites would be finalized through a site plan or plot plan process. Implementation of the floating land use designations would be reviewed by the Community Development Director, or designee, and allowed as part of a ministerial approval subject to substantial conformance with applicable, objective school and park development standards.

Lake and Parkland

The Project proposes approximately 80 acres of recreational uses, including the currently approved 40-acre lake system, plus a 15-acre lake promenade encircling the proposed lake development and an additional 25 acres of parks. The lake would be located in the center of the Project site, primarily in PA 2, and serve as a focal point for the Town Center. The lake promenade would encircle the lake, providing multimodal connectivity and several public amenities including hiking, walking, and biking trails; bandstands; amphitheaters; picnic areas; cafes; kiosks; canoe and kayak rentals; and piers. The lake and lake promenade are floating zones (or land uses). Consistent with prior approvals, tertiary-treated water and/or existing on-site groundwater wells would provide water to fill and maintain the lake features, which, as previously envisioned, would be designed and implemented to collect, capture, retain, and treat surface water flows as part of the Aquabella site drainage and flood control hydrology. The location of the 25 additional acres of parks would be flexible; parkland would be distributed throughout the Project site and include sports parks, neighborhood parks, and/or pocket parks. In addition to this public parkland, private recreation facilities and amenities would be provided at the larger multifamily residential developments.

Schools

The Project proposes approximately 40 acres for the development of up to four school locations: three elementary schools and one middle school. The number and locations of the schools would be determined after consultation with the Moreno Valley Unified School District.

Commercial

The Town Center is proposed to be a central location for retail, dining, entertainment, and other commercial uses for the Project. Approximately 49,900 square feet of shops, restaurants, offices, and entertainment attractions would serve the Project area. The Town Center would be located within PA 2; however, it could be implemented anywhere within the Project site due to the Town Center floating land use designation. Further, the Town Center may be segmented such that a portion is located in one area of the site and another portion is completed in a different location within the Project site.

Infrastructure

The Aquabella Specific Plan Amendment (Appendix A) provides the development strategy and conceptual site plans for all essential infrastructure to support the different components of the Project. The Specific Plan Amendment addresses mobility (vehicle, public transit, bicycle, and pedestrian infrastructure), wet and dry utilities (potable and recycled water, stormwater drainage, sewer, electricity, and gas), solid waste, and recycling.

Mobility Plan

Figure 3-6, Conceptual Circulation Master Plan, identifies approximate road alignments and potential access points to existing roadways. Intersection density is a proxy for street connectivity, which would help to facilitate a greater number of shorter trips including those made by walking, biking, and scooter. The internal street network would also contain an extensive bike network with Class II, buffered Class II, and off-street bike paths, and would connect to the broader Moreno Valley bike network and support proposed non-automobile mobility modes (e.g., bikeshare, electric scooter). Further, the internal street network would include a comprehensive sidewalk and trail network to facilitate walking.

The Project also proposes design features to help reduce the vehicle trips generated by the Project. These features, known as transportation demand management (TDM) features, promote non-automotive modes of transportation such as walking, biking, scooter, public transit, and ride-sharing. The TDM features used in the Project are documented by the California Air Pollution Control Officers Association (CAPCOA) in its Handbook for Analyzing Greenhouse Gas Emissions Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA 2021).

Drainage and Stormwater Management

The drainage of the Project site would utilize the lake system for flood control (see Chapter 4 of the Specific Plan Amendment [Appendix A] for the Conceptual Drainage Master Plan). The proposed drainage plan includes the use of the lakes for stormwater runoff and post-construction best management practices (e.g., bioretention basins). The lakes would be installed with sufficient storage capacity to capture and detain all runoff volume from a 100-year storm (Appendix H). The lakes would also serve as integrated water management facilities by capturing, retaining, and treating stormwater runoff before it is discharged off site. The lakes would include water quality systems to circulate, aerate, and treat the water in the lake to maintain high water quality, regardless of the water source used to maintain lake levels. By combining stormwater capture, groundwater capture, and groundwater and recycled water storage in a system of lakes, site irrigation can use either recycled water, stormwater, or more typically a mix for site irrigation. Water removed for irrigation would be offset through stormwater capture and the addition of recycled or well water. The lake system would also serve as a water conveyance facility, moving stormwater across the site for use in irrigation or discharge to the Line F channel, depending on weather conditions.

Potable and Recycled Water

The Aquabella Specific Plan Amendment (Appendix A) provides a conceptual potable and recycled water master plan. Potable water would be supplied to the site through existing parallel pipelines. Extensions are proposed along Brodiaea Avenue, Oliver Street, and John F. Kennedy Drive and through the internal backbone circulation system. Connections to existing pipelines are proposed on Cactus Avenue, Nason Street, John F. Kennedy Drive, and Oliver Street. All necessary extensions to connect to the existing facilities pipelines needed for potable water flows would be coordinated with Eastern Municipal Water District (EMWD) prior to construction.

The use of recycled water meets EMWD's mandate to reduce its consumption of imported water and groundwater. Project implementation would involve the extension of recycled water lines into the interior of the Project site. Connections to existing recycled water lines are proposed on Cactus Street, Nason Street, and Oliver Street. All necessary extensions to the existing facilities needed for the proposed wastewater flows would be coordinated with EMWD prior to construction.

Sewer

Project implementation would complete the installation of a 42-inch main sewer line adjacent to the Line F channel, after which the existing 33-inch main that takes wastewater from John F. Kennedy Drive and Kaiser Permanente Hospital through the Project site would be abandoned. This line and the existing sewer main on Nason Street would serve as the new connection points from the Project to the existing facilities. On site, the Project proposes to install a sewer main line beneath the backbone roadway traversing the Project site from Cactus Avenue along John F. Kennedy Drive to the 42-inch proposed trunk adjacent to the Line F channel. The Project proposes to install an energy-efficient system utilizing gravity to send flow through the proposed system. All necessary extensions to the existing facilities needed for the proposed wastewater flows would be coordinated with EMWD prior to construction (see the Conceptual Sewer Master Plan as part of Chapter 4 of the Specific Plan Amendment [Appendix A]).

Solid Waste and Recycling

Solid waste, recycling, composting, and special waste handling services within the City are provided under contract by Waste Management of Inland Valley. Waste Management provides trash, recycling, and green waste pickup for residential customers and business customers.

The Project would be served by two separate landfills, depending on the contract hauler. The first is the Badlands Landfill, located approximately 6.5 miles from the Project site in the City; it is accessed from State Route 60 at Theodore Avenue. An alternate landfill serving the Project is the Lamb Canyon Landfill, located between the City of Beaumont and the City of San Jacinto, with Interstate 10 to the north and Highway 74 to the south.

Energy and Dry Utilities

The City would provide electricity to the Project site. All electrical lines within the Project would be constructed underground. Southern California Gas Company would provide natural gas service to the Project. Only commercial uses, not residential land uses, would be built with natural gas connection. The Project also includes sustainability features that promote energy conservation, renewable energy, and climate protection, a summary of which is provided in Chapter 6, Design Guidelines, of the Specific Plan Amendment (Appendix A).

In conjunction with electric and gas installation, telephone, cable television, and internet utilities will also be installed.

Development Regulations

The Aquabella Specific Plan Amendment (Appendix A) contains development regulations to provide basic criteria that govern all development within the boundary of the Specific Plan Area. Overall, the development regulations limit the maximum number of dwelling units within Aquabella to 15,000 mutifamily residential units. Open Space (OS) land use shall be pursuant to the OS district standards within Section 9.06 of the Moreno Valley Municipal Code. The development regulations establish development standards for future structures, including minimum and maximum lot sizes, setbacks, yards, and building height. In addition, the development regulations govern off-street parking requirements, walls and fences, lighting, and permitted and accessory uses. See Chapter 5 of the Specific Plan Amendment for specific regulations and standards.

Design Guidelines

The Aquabella Specific Plan Amendment (Appendix A) identifies design guidelines to ensure uniformity of visual character of future development. The guidelines address primarily aesthetic issues such as landscape architecture, building architecture, site planning, lighting, sustainability, and connectivity. To accommodate changes in design standards over time, the design guidelines would allow for flexibility in their application and provide guiding principles for all future development, as well as a community vision describing each component of the proposed Project.

Site Planning Guidelines

The site planning guidelines provide a planning and design framework for the different components of the Aquabella Specific Plan Amendment (Appendix A) (the residential, town center, lake and lake promenade, and parks and open space components) and the relationship between them. The design guidelines provides opportunities for the provision of pedestrian and bicycle circulation, electric multi-occupant trams, vehicular circulation, and parking management. The site planning guidelines also address the relationship between buildings and thoroughfares, focal points and gathering places, neighborhood connectivity, and the town center environment.

Sustainability Guidelines

The Aquabella Specific Plan Amendment (Appendix A) would incorporate project design features (PDFs) into development to create a sustainable community. Chapter 6 of the Specific Plan Amendment identifies several features, such as recycled water for landscaping, solar roofs, and sustainable building materials that would support sustainability of the Project. Further, Chapter 6 describes the pedestrian and bicycle circulation system, which would provide multimodal access paths for connection throughout the community. Traffic calming features such as roundabouts and medians would be integrated into street design to encourage pedestrian and bicycle travel by enhancing safety and comfort. Enhanced pedestrian crossings and bridges would also be used for additional safety. Chapter 6 provides visual representations of the conceptual design of the street system (see Figures 6-1 through 6-17 of the Specific Plan Amendment [Appendix A]).

Landscape Design Guidelines

Chapter 6 of the Specific Plan Amendment (Appendix A) contains the landscape design guidelines, which would apply to signage, streetscapes, the lake and lake promenade development, and parks and open space. Part of the landscape design guidelines is the vision for entry monumentation, wayfinding signage, street signs, and placemaking, which identify the community, provide direction and information, and enhance the experience. The streetscape landscaping guidelines focus on dense landscaping of trees to contribute to a “city of trees” appearance. Arterial streets would have simple landscape character to reflect the faster travel speed, while neighborhood streets would incorporate a thick canopy to contribute to cooling and shading of the area. Emphasis would be placed on drought-tolerant plants and native species. Lighting is also addressed as it relates to the streetscape. Lighting would focus on lighting fixtures directed away from surrounding development and shielded where needed to minimize spillover.

Architectural Design Guidelines

The architectural design guidelines provide the general design direction and expectations for the quality, character, innovative design, and sustainability of buildings within the Specific Plan. The objective of these guidelines is to

provide design criteria for the various potential residential, retail, mixed-use, office, hotel, and education/institutional buildings that may be developed on the Project site. The architectural design guidelines set forth the appropriate architectural styles for the Specific Plan Traditional/Americana and Contemporary. The architectural design guidelines also provide standards for land use types, including form and massing, building features, entries, colors, exterior building materials, and more.

Implementation Processes

Chapter 7 of the Aquabella Specific Plan Amendment (Appendix A) describes the administrative and implementation processes associated with future development within the Project site. The proposed implementation process states that all development within the Project site would be subject to ministerial review and approval of plot plans as set forth in the procedures of Chapter 7. The type of application requested would determine the process that would be followed for each application. The matters covered by the Specific Plan Amendment ministerial review and approval process encompass the following:

- Plot Plans
- Interpretations
- Equivalent Standards
- Specific Plan Text, Figure, Table, or Exhibit Changes
- Minor Deviations from Development Standards
- Similar Land Uses/Modifications
- Adjustments, Transfers, and Conversions
- Substantial Conformance Determinations

The specific process that each of these application types would follow are detailed in Sections 7.3.1.1 through 7.3.2.8 of Chapter 7 of the Specific Plan Amendment.

3.3.3 Project Phasing

To date, 516 acres of the site have been developed under the City's prior approvals. The Project Phasing Plan coordinates the provision of public facilities and services with the Project's sequence and pattern of development. The Phasing Plan is conceptual in nature and may change over the development lifetime of the Project in response to changing market conditions or other unforeseen conditions. Project phasing is intended for illustrative purposes and is not a set schedule. Development phasing and implementation of public facilities and services may be modified, provided that the required improvements are provided at the time of need. Amendments to the phasing are considered administrative in nature. Project conditions of approval, a Development Agreement, or other enforceable mechanisms would ensure infrastructure and facility needs are appropriately tied to implementing each development phase. In that context, the Project is estimated to take 12–15 years to build-out with an absorption rate of approximately 1,200 units per year, using a straight-line projection method. For air quality modeling purposes, the modified Project forecasts a 13-year build-out (the mid-range) with the conservative estimate of approximately 2,500 units per phase.

Development implementation may occur within several areas of the site simultaneously. While some of the infrastructure for the Project is already in place, additional infrastructure improvements would be correlated to

correspond to residential development phasing and consider the sequence required by any public financing mechanisms and any Development Agreement between the applicant and City.

For the purposes of the preparation of this SEIR, Project phasing is broken down into six total Project phases. Implementation of each Project phase would occur in separate construction phases. Table 3-2 details each Project phase, anticipated development activities, and approximate duration. Site grading would occur during horizontal site development phases, and grading material would be balanced on site as much as possible.

Table 3-2. Anticipated Construction Phasing and Activity

Construction Phase	Year	Anticipated Activity	Duration	Units
1	2025	Infrastructure Improvements	1 year	N/A
	2026	Dwelling Unit Construction	1 year	2500
2	2027	Infrastructure Improvements	1 year	N/A
	2028	Dwelling Unit Construction	1 year	2500
3	2029	Infrastructure Improvements	1 year	N/A
	2030	Dwelling Unit Construction	1 year	2500
4	2031	Infrastructure Improvements	1 year	N/A
	2032	Dwelling Unit Construction	1 year	2500
5	2033	Infrastructure Improvements	1 year	N/A
	2034	Dwelling Unit Construction	1 year	2500
6	2035	Infrastructure Improvements	1 year	N/A
	2036	Dwelling Unit Construction	1 year	2500
		Total	**12 years**	**15000**

Note: N/A = not applicable.

3.3.4 Site Evacuation Plan

The Site Evacuation Plan, included as an Appendix N to this SEIR, was prepared for the Project and would be implemented in the case of an emergency evacuation as a result of wildfire.

3.3.5 Project Design Features

The Project would implement operational PDFs to reduce greenhouse gas emissions. The Project would also implement PDFs that reduce other potential environmental impacts, such as those relating to vehicle miles traveled, and therefore achieve direct or indirect air quality, greenhouse gas emissions, and energy co-benefits.

PDF-AQ/GHG-1: Electric Vehicle Charging Infrastructure. The Project applicant or designee shall provide electric vehicle (EV) charging infrastructure that meets or exceeds 2022 California Green Building Standards Code Tier 2 standards to encourage use of EVs, consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan. The Project provides a total of 23,772 parking spaces. Of that amount, the Project shall install (a) 9,509 (or 40%) Level 2 240-volt (v) electric vehicle receptacles in Project parking structures and (b) 3,566 (or

15%) Level 2 240 v electric vehicle supply equipment (or stations) in Project parking lots or remaining garages.

PDF-AQ/GHG-2: No Wood-Burning Fireplaces or Stoves and No Natural Gas Fireplaces. The Project applicant or designee shall install only electric fireplaces in residential units. Project residential units are prohibited from having wood-burning or natural gas fireplaces or wood-burning stoves.

PDF-AQ/GHG-3: Require All-Electric Development. All Project-related residential and non-residential development shall use all-electric appliances and end uses (including heating, ventilation, and air conditioning; water heating; and induction cooking) with the exception of restaurant land uses within the retail/food and beverage space (estimated at approximately 14,970 square feet of the Project's Town Center use of 49,900 square feet of commercial/retail use and 300,000 square feet of hotel use, totaling 349,900 square feet). Swimming pool and spa equipment and water heating shall also use electricity or solar instead of natural gas. (This PDF is largely consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends all-electric appliance uses without any natural gas connections or any propane or other fossil fuels for space heating, water heating, or indoor cooking.)

PDF-AQ/GHG-4: Provision of Rooftop Solar. The Project applicant or designee shall provide rooftop photovoltaic (PV) solar panels on all residential and non-residential buildings in accordance with the requirements of the version of Title 24, Part 6, of the California Building Standards Code and California Green Building Standards Code in effect at the time of building permit application to provide an on-site source of renewable energy. The swimming pools' and spas' heating demand shall be served by a minimum of 50% solar water heating.

The following table identifies the building type, size, PV generation per square foot, and the annual solar production (kilowatt-hours).

Building Type	Building Size	PV Generation per Square Foot (kWh/sf/year)	Annual Solar Production (kWh)
Multifamily low-rise	6,750,000	3.16	21,330,000
Multifamily midrise	6,750,000	3.79	25,582,500
Hotel	300,000	0.62	186,000
Elementary schools	192,000	3.03	581,760
Middle school	85,000	3.03	257,550
Restaurants	14,970	0.76	11,377
Retail	34,930	4.95	172,904
		Total	**48,122,091**

Note: kWh/sf/year = kilowatt-hour per square foot per year; kWh = kilowatt-hour.

PDF-AQ/GHG-5: LED Lighting. The Project applicant or designee shall install light-emitting diode (LED) outdoor lighting in public spaces at the Project site in compliance with dark skies design considerations and policies of the City of Moreno Valley General Plan 2040 and shall install LED lighting in all Project residential units at the time of construction.

PDF-AQ/GHG-6: Energy Efficient Appliances. The Project applicant or designee shall install ENERGY STAR-rated appliances for residential refrigerators, dishwashers, clothes washers, ceiling fans, and non-residential commercial refrigerators.

PDF-AQ/GHG-7: Energy Smart Meters. The Project applicant or designee shall install real-time energy smart meters within all residential and non-residential development.

PDF-AQ/GHG-8: Cool Pavements. The Project applicant or designee shall install cool pavements to reduce the potential for the urban heat island effect. Outdoor pavements, such as internal walkways and patios, shall use paving materials with three-year Solar Reflectance Index (SRI) of 0.28 or initial SRI of 0.33.

PDF-AQ/GHG-9: Solid Waste Reduction. The Project applicant or designee shall implement a solid waste reduction strategy that includes, at a minimum, storage areas for recyclables and green waste in new construction and food waste storage (community composting zones). Solar-powered compacting trash and recycling containers shall be provided within the public areas of the Project site. The Project applicant or designee shall contract with a commercial solid waste company to provide, remove, and replace solid waste containers at all residential and commercial facilities.

PDF-AQ/GHG-10: Establish a Local Farmer's Market. The Project applicant or designee shall establish a local farmer's market for Project residents and surrounding area that provides local sources of food by the time or before Project development obtains certificate of occupancy for the 500th residential unit.

PDF-AQ/GHG-11: Tree Planting. The Project applicant or designee shall include an urban and parkland tree planting program for carbon sequestration at a minimum of one tree per dwelling unit or a total of 30,000 trees planted at Project buildout. If a tree dies, the Project applicant or designee shall plant a new replacement tree as enforced through the covenants, conditions, and restrictions within 30 years of planting. Trees planted may include, but are not limited to, southern magnolia, California sycamore, American elm, slash pine, and white ash.

The Project applicant or designee shall include a water use efficiency and conservation plan that includes the following four PDFs that are considered herein for GHG emission and energy reductions.

PDF-AQ/GHG-12: Water Use Efficiency and Conservation Plan. The Project applicant or designee shall implement a Water Use Efficiency and Conservation Plan that includes the following minimum requirements:

Indoor Conservation Features and Operations:

- **Install low-flow fixtures:** In the residential units, install low-flow toilets at 1.28 gallons per flush, faucets at 1.2 gallons per minute, showerheads at 1.8 gallons per minute, and kitchen faucets at 1.8 gallons per minute. In common areas, install faucets at 0.5 gallons per minute and urinals at max of 0.25 gallons per minute/flush. (These fixtures use less water while maintaining efficient performance.)
- **Install dual-flush toilets:** These toilets offer two flush options—one for liquid waste less than 1 gallons per minute and another for solid waste at 1.28 gallons per minute. (This allows the appropriate use of water for flushing needs.)
- **Use water-efficient appliances:** The Project applicant or designee shall install energy-efficient and water-saving appliances like dishwashers and washing machines with the ENERGY STAR label only.
- **Implement hot water recirculation system:** The Project applicant or designee shall implement a recirculation system for hot water systems to ensuring low to no wasted water while waiting for water to reach desired temperature.
- **Incorporate leak detection on each residential building.** Leak detection will be incorporated into residential structures to detect water leaks typical of residential uses such as irrigation and plumbing.
- **Capture and reuse heating, ventilation, and air conditioning condensation:** The Project applicant or designee shall direct condensation from air conditioning units to water plants or for other non-potable uses.
- **Implement good housekeeping and regular maintenance: The** Project applicant or designee shall regularly (daily, weekly, monthly, etc. as applicable) check and maintain plumbing fixtures, irrigation systems, and appliances to ensure they are functioning efficiently and not wasting water.

Outdoor Conservation Features and Operations:

- **Install only "Smart Irrigation Systems" for community landscaping:** The Project applicant or designee shall utilize smart sprinkler systems that adjust watering schedules based on weather conditions, soil moisture, and plant needs to avoid overwatering or wasteful watering. The Project applicant or designee shall also incorporate seasonal specific controls to ensure watering occurs during the most efficient times of day.
- **Install adjustable water pressure regulator:** The Project applicant or designee shall install pressure regulators to maintain optimal water pressure, preventing overuse and leaks.

- **Incorporate leak detection into each master landscape meter complex.** Leak detection will be incorporated into residential structures to detect water leaks from landscaping.
- **Include drought-tolerant landscaping:** The Project applicant or designee shall include native and drought-tolerant vegetation that requires less water to thrive and is known to survive in the greater Moreno Valley area. The Project applicant or designee shall replace drought-tolerant landscaping if it dies through enforceable Project covenants, conditions, and restrictions (CC&Rs) for 30 years after initial planting.
- **Harvest and reuse rainwater and drainage water:** The Project's lake shall be part of a water retention and reuse program.
- **Use permeable pavement surfaces:** The Project applicant or designee shall use permeable materials in parking areas, internal walkways, and public areas. (These surfaces will allow water to infiltrate the ground rather than running off, reducing runoff and promoting groundwater recharge.)
- **Include community education and outreach:** The Project applicant or designee shall educate employers, employees, and residents about water conservation practices and encourage them to implement mindful water usage habits through enforceable Project CC&Rs.
- **Place educational signage:** The Project applicant or designee shall place informational signs and notices at appropriate locations on the Project site to encourage water-saving behaviors among residents and guests.

PDF-AQ/GHG-13: Use Recycled Water for Irrigation. The Project applicant or designee shall use recycled water for irrigation areas including the school irrigated areas, Town Center irrigation, parks, parkways, and urban landscape.

PDF-AQ/GHG-14: Use of Local Well Water for Lake. The Project applicant or designee shall use local well water as the primary source to meet the lake initial fill and refilling needs. A minimum of 200-acre feet per year of local water will be used for the lake at Project buildout.

PDF-AQ/GHG-15: Integrated Stormwater System. The Project applicant or designee shall include an integrated stormwater, flood control, and erosion control lake system with bio basins and native plant restoration areas that will increase groundwater percolation and downstream water quality.

The Project applicant or designee shall include an extensive TDM program consisting of the transportation-related PDFs listed below; the Project applicant or designee shall also host an on-site TDM coordinator at the Project's leasing center to implement such TDM measures.

PDF-TRANS-1: Community-Based Travel Planning. The Project's residential uses shall implement community-based travel planning (CBTP). CBTP is a residential-based approach to outreach that provides households with customized information, incentives, and support to encourage the use of transportation alternatives in place of single occupancy vehicles, thereby reducing household vehicle miles traveled and associated greenhouse gas emissions. Implementation of this feature in the Project shall consist of teams of trained travel advisors visiting all households within the Project upon move-in and having tailored

conversations about residents' travel needs and educating residents about the various transportation options available to them.

PDF-TRANS-2: Unbundle Residential Parking Costs from Property Costs. The Project applicant or designee shall unbundle, or separate, a resident's parking costs from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost. On the assumption that parking costs are passed through to the vehicle owners/drivers utilizing the parking spaces, this feature results in decreased vehicle ownership and, therefore, a reduction in vehicle miles traveled and greenhouse gas emissions. Parking costs must be passed through to the vehicle owners/drivers utilizing the parking spaces for this feature to result in decreased vehicle ownership. Implementation of this feature in the Project shall consist of parking spaces costing approximately $100–$150 as a separate monthly cost from the rental of a unit. (This required feature is consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends that "multifamily residential development … [require] parking costs to be unbundled from costs to rent or own a residential unit.")

PDF-TRANS-3: Commute Trip Reduction (CTR) Program Marketing. The Project applicant or designee shall implement a marketing strategy to promote the Project site employer's CTR program. Information sharing and marketing shall promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing vehicle miles traveled and greenhouse gas emissions.

Implementation of this feature shall consist of the following performance criteria:

- On-site or online commuter information services
- Employee transportation coordinators
- On-site or online transit pass sales
- Guaranteed ride home service

PDF-TRANS-4: Rideshare Program. The Project applicant or designee shall implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Ridesharing encourages carpooled vehicle trips in place of single-occupied vehicle trips, thereby reducing the number of trips, vehicle miles traveled, and greenhouse gas emissions.

Implementation of this feature in the Project shall consist of promoting the following required performance criteria:

- Designating a certain percentage of desirable parking spaces for ridesharing vehicles
- Designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles
- Providing an app or website for coordinating rides

PDF-TRANS-5: End-of-Trip Bicycle Facilities. The Project applicant or designee shall install and maintain end-of-trip bicycle facilities. Per CAPCOA's 2021 GHG Handbook, end-of-trip facilities

include bike parking, bike lockers, showers, and personal lockers. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing vehicle miles traveled and greenhouse gas emissions.

Implementation of this required feature will be sized to encourage bicycling by providing facilities to accommodate 10%–20% of the forecasted 804 employees staffed daily on the Project site. Implementation of this feature shall also be regularly maintained by the Project applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4.

PDF-TRANS-6: Discounted Transit Program for Work Trips. The Project applicant or designee shall provide subsidized, discounted, or free transit passes for employees through the permanent transportation management association referenced in PDF-TRANS-4. Per CAPCOA's 2021 GHG Handbook, reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced vehicle miles traveled and thus a reduction in greenhouse gas emissions. The Project design shall ensure accessibility either within 1 mile of high-quality transit service (rail or bus with headways of less than 15 minutes), 0.5 miles of local or less frequent transit service, or along a designated shuttle route providing last-mile connections to rail service. With the availability of bikeshare service, the Project site may be located up to 2 miles from a high-quality transit service.

Implementation of this feature in the Project shall be provided by the Project applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4. Transit service shall be expanded with implementation of the Project to the following:

- Bus Rapid Transit is proposed on Alessandro Boulevard that would provide high-quality transit service within 0.5 miles of the Project.
- Bus service will provide direct connections to the Moreno Valley/March Field Metrolink Train Station located approximately 5 miles west of the Project.
- Bikeshare will be available to support the discounted transit program, including a non-electric bike share program with a minimum of 150 bikes and an electric bike share program with a minimum of an additional 150 bikes.

PDF-TRANS-7: Non-Electric Bikeshare Program. The Project applicant or designee shall establish a non-electric bikeshare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. The bikeshare program shall provide users with on-demand access to non-electric bikes for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to bicycles, displacing vehicle miles traveled and thus reducing greenhouse gas emissions. This program shall provide 25 electric bikes at certificate of occupancy of each 2,500th unit, and a minimum of 150 such bikes located within 0.5 miles of the Project's mobility hub to be maintained by the Project applicant or designee.

PDF-TRANS-8: Electric Scootershare Program. The Project applicant or designee shall establish the scootershare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. Scootershare programs provide users with on-demand access to electric scooters for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to scooters, displacing vehicle miles traveled and thus reducing greenhouse gas emissions.

PDF-TRANS-9: Extend Transit Network Coverage. The Project applicant or designee shall coordinate with the Riverside Transit Agency to update bus service routes and service times to serve the new community through the permanent transportation management association referenced in PDF-TRANS-4. This would extend transit network coverage to existing and future employment centers, such as the World Logistics Center. Additionally, this would include extending transit hours for all shift times, such as the midnight shift change at the World Logistics Center. Per CAPCOA's 2021 GHG Handbook, this feature includes expansion of the local transit network by either adding or modifying existing transit service or extending the operation hours to enhance the service near the Project site. Starting services earlier in the morning and/or extending services to late-night hours can accommodate the commuting times of alternative-shift workers. This encourages the use of transit and therefore reduces vehicle miles traveled and associated greenhouse gas emissions.

PDF-TRANS-10: Increase Transit Service Frequency. The Project applicant or designee shall coordinate with the Riverside Transit Agency (RTA) to update bus service routes and service times to serve the new community. This will include working with RTA to establish Bus Rapid Transit on Alessandro Boulevard and providing direct bus connections to the Moreno Valley/March Field Metrolink Train Station. Per CAPCOA's 2021 GHG Handbook, increased transit frequency reduces waiting and overall travel times, which improves the user experience and increases the attractiveness of transit service. This results in a mode shift from single occupancy vehicles to transit, which reduces vehicle miles traveled and associated greenhouse gas emissions.

PDF-TRANS-11: Implement Bus Rapid Transit (BRT). The Project applicant or designee shall support the City of Moreno Valley and the Riverside Transit Agency plans for BRT along Alessandro Boulevard. Implementation of this feature would include improved travel times from transit signal prioritization, increased service frequency, and a full-featured BRT service operating on a fully segregated running way with a specialized vehicles, attractive stations, and efficient fare collection practices.

Per CAPCOA's 2021 GHG Handbook, this feature will convert an existing bus route to a BRT system. BRT includes the following additional components, compared to traditional bus service: exclusive right-of-way (e.g., busways, queue jumping lanes) at congested intersections, increased limited-stop service (e.g., express service), intelligent transportation technology (e.g., transit signal priority, automatic vehicle location systems), advanced technology vehicles (e.g., articulated buses, low-floor buses), enhanced station design, efficient fare-payment smart cards or smartphone apps, branding of the system, and use of vehicle guidance systems. BRT can increase the transit mode share in a community due to improved travel times, service frequencies, and the unique components

of the BRT system. This mode shift reduces vehicle miles traveled and the associated greenhouse gas emissions.

PDF-TRANS-12: Mobility Hub. The Project applicant or designee shall develop a state-of-the-art Mobility Hub at or near the Project site to bolster the effectiveness of active transportation options (mobility hubs are places of connectivity that bring together multiple modes of travel and strengthen first-mile/last-mile connections to transit). Mobility hubs provide a centralized location for non-automotive transportation modes to connect users to their destinations. There are limited benefits to implementing a stand-alone mobility hub, as the facility is meant to promote and support alternative transportation modes. Mobility hubs should be supplemented with additional strategies or programs that provide increased public transit, bicycle, and pedestrian access and improvements. Implementation of the Mobility Hub shall require coordination with the Riverside Transit Agency, Metrolink, and the City of Moreno Valley. Though the proposed Mobility Hub is not included in CAPCOA's 2021 GHG Handbook, many of the characteristics of the Mobility Hub (increased transit accessibility, increased bicycling accessibility) are part of other transportation demand management (TDM) strategies outlined in CAPCOA. The Mobility Hub is anticipated to strengthen the effectiveness of other proposed TDM strategies. However, to provide a conservative approach to trip generation, additional reductions were not applied for the Mobility Hub in the vehicle miles traveled reduction calculated for the Project.

PDF-TRANS-13: Electric Bikeshare Program. The Project applicant or designee shall establish an electric bikeshare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. The bikeshare program shall provide users with on-demand access to bikes for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to bicycles, displacing vehicle miles traveled and thus reducing greenhouse gas emissions. Like the non-electric bike program in PDF-TRANS-7, this program shall provide an additional 25 electric bikes at certificate of occupancy of each 2,500th unit, and a minimum of an additional 150 such bikes located within 0.5 miles of the Project's mobility hub to be maintained by the Project applicant or designee.

PDF-TRANS-14: Provide Shuttle Service to Employment Centers. The Project applicant or designee shall provide shuttle service to existing and future employment centers, including the World Logistics Center. Such service shall be provided at the completion of the 2,500th unit, and be located within 0.5 miles of the Project's mobility hub.

PDF-TRANS-15: Implement Market Price Public Parking. The Project applicant or designee shall install parking meters or implement a residential parking permit program that prices all on-street public parking in the Project's Town Center at market rates. Pricing on-street parking helps incentivize shifts to alternative transportation modes, decreasing total vehicle miles traveled to and from the priced areas.

The Project includes the following land use planning and design PDFs.

PDF-LU-1: Mixed-Use Project Design. The Project design shall integrate a mix of residential, commercial, retail, entertainment, employment, educational, and recreational uses that

capture and reduce vehicular trips and associated environmental impacts, including greenhouse gas emission reductions. The Project also shall include reduced parking requirements in its regulatory Specific Plan as a vehicle miles traveled (VMT) reduction tool, consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends reduced parking requirements to reduce VMT.

PDF-LU-2: Provision of Urban Core. The Project shall create an urban core that provides a wide array of residential units, including workforce housing, oriented toward the adjacent, existing regional medical centers, the community college, and other nearby job centers to further reduce vehicle trips and associated environmental impacts.

PDF-LU-3: Short Walkable Blocks. The Project design shall be composed of short, walkable blocks of up to 600 feet in length.

PDF-LU-4: Increased Residential Density. The Project shall increase residential density, leading to shorter vehicle trips and fewer single-occupancy vehicle trips than surrounding lower-density developments. The increase in residential density in this infill Project site surrounded by existing urban uses and served by existing utilities and essential public services (e.g., transit, streets, water, and sewer) reduces vehicle miles traveled (VMT). The residential increase is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends locating residential and mixed-use development projects on infill sites surrounded by urban uses, existing utilities, and essential public services as a means of reducing VMT. The increase in residential density is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends transit-supportive densities at a minimum of 20 residential dwelling units per acre to reduce VMT. The Project site is in proximity to existing transit options, which is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update.

PDF-LU-5: Walkable/Bikeable Community. The Project site is located in an area with average vehicle miles traveled below that of the City of Moreno Valley and the region. The Project design shall, and does, provide a walkable and bikeable community proximate to major area job centers, including World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, University of California Riverside, Moreno Valley College, and regional and local shopping and commercial centers, which would allow residents to live and work locally, cutting commute times, reducing vehicle trips, reducing greenhouse gas emissions, and improving air quality. An efficient transportation network is a central tenet of the Project, which will provide a tram connection to job centers, enhanced transit, pedestrian and bicycle routes, ridesharing, non-electric bikes, electric bikes, electric scooters, a mobility hub, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures.

PDF-LU-6: Transit Benefits. The Project site is located along major transit routes, and the Project applicant or designee shall support frequent and reliable transit service and other multi-modal transportation measures, including walking and biking. The Riverside Transit Agency (RTA) provides existing bus routes proximate to the site. Route 31 runs along Nason Street to the Riverside University Medical Center. Route 20 also serves the site

along Alessandro, Nason, and Moreno Beach Dr. to the Riverside University Medical Center, Kaiser Permanente Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across Interstate 215. The Project applicant or designee shall coordinate with the RTA with respect to transit service and other multi-modal transportation options related to the Project to reduce vehicle miles traveled.

PDF-LU-7: Integrated Design. The Project plans shall include an integrated, connected town center neighborhood intended to maximize walkability, bike-ability, and transit use as part of an efficient transportation network in the City of Moreno Valley. The Project incorporates transit, pedestrian, and bicycle routes and other multi-modal transportation programs and technologies to move residents efficiently to and from major job centers and reduce the need for on-site parking. Extensive parks, trails, the lake promenade and open space features, sidewalks, internal walkways, and roadways on site shall be required to encourage biking and walking. Trees and landscaping shall be used throughout the Project site, along streets, and along multi-use trails and sidewalks to improve the pedestrian experience and have a cooling effect to further promote walking and biking. Such required design ensures reductions in vehicle miles traveled and greenhouse gas emissions.

PDF-LU-8: Other Integrated Project Features. The lake promenade and integrated trail system shall be required to connect the residential, retail, restaurant, recreational, hotel, and other uses, providing a route that users can walk and bike along. Sidewalk improvements shall be provided throughout the community to promote walking. Bike lanes and shared-use streets shall be incorporated through the Specific Plan area to complement the new and existing development in a way that promotes the human scale. These bike lanes shall connect to existing Class II bike lanes on Cactus Ave., Nason Street, Iris Ave, Lasselle Street, and John F. Kennedy Dr.

PDF-LU-9: Complete Streets. Complete streets, which are local roads and streets that adequately accommodate the needs of bicyclists, pedestrians, and transit riders, as well as motorists, shall be provided to promote pedestrian and bicycle use through the incorporation of design features such as multi-use trails and sidewalks, crosswalks, shared roads, landscaping, and pedestrian bridges across arterials and the on-site drainage.

PDF-LU-10: Traffic Calming. Traffic calming design of neighborhoods streets shall include street chokers (curb extensions that narrow a street by widening the sidewalks or planting strips, effectively creating a pinch point along the street), crosswalks, roundabouts landscaped medians, and shared street design to promote safer streets.

PDF-LU-11: Roundabouts. The Project shall include roundabouts as a means of traffic calming and GHG reduction.

The Project shall implement the following PDF related to wildfire.

PDF-WF-1:

- All developments within the Project site must include a proactive wildfire education program utilizing a multi-pronged approach to fire safety following the "Ready, Set, Go!" approach to wildfire evacuation, to include, but not limited to:
  a. Annual wildfire and evacuation safety awareness meeting in coordination with local fire agencies.
  b. Annual reminder notices will be provided to each employee encouraging them to review this wildfire education program and be familiar with evacuation protocols
  c. The development's website will host a webpage dedicated to wildfire and evacuation education and awareness, which should include a copy of this wildfire education program and the resources provided herein.
- All homeowners associations and property managers for developments within the Project site must designate Fire Safety Coordinators to oversee implementation of the wildfire education program. The Fire Safety Coordinators shall:
  a. Prepare and distribute the annual reminder notice that shall be provided to each occupant encouraging them to review this wildfire education program and be familiar with community evacuation protocols.
  b. Coordinate with local fire agencies to hold an annual fire safety and evacuation preparedness informational meeting for occupants. The meeting should be attended by representatives of appropriate fire agencies and important fire and evacuation information should be reviewed.
  c. Maintain fire safety information on the development's website, including the wildfire education program and materials from the "Ready, Set, Go!" Program.

For non-residential uses, Fire Safety Coordinators shall also:

- Coordinate an annual fire evacuation drill/fire exercise to ensure proper safety measures have been implemented, facility awareness and preparation of a facility-wide "Ready, Set, Go!" plan. The Fire Safety Coordinator will also organize employee training and awareness through various practices:
  1. New hire fire awareness and evacuation training
  2. Ongoing staff training
  3. Facility sweeps by trained staff
- Strategically place fire safety and evacuation/sheltering protocol information.

3.4 Related Environmental Review, Consultation, and Intended SEIR Uses

Pursuant to Section 15082 of the CEQA Guidelines, a notice of preparation for the Project was released for public review from September 29, 2023, to November 6, 2023. The City held a public scoping meeting on October 18, 2023, at 6:00 p.m., to present the proposed Project to the public and to solicit input from interested parties regarding environmental issues to be addressed in the Draft SEIR.

This SEIR will be circulated for public review and comment for a period of 45 days, beginning **May 31, 2024**, and ending **July 15, 2024**. The Draft SEIR is available for public review on the City's website at: http://www.moreno-valley.ca.us/cdd/documents/about-projects.html and in person at City Hall located at 14177 Frederick Street, Moreno Valley, during normal business hours (7:30 a.m. to 5:30 p.m., Monday through Thursday and Friday, 7:30 a.m. to 4:30 p.m.). In addition, the Draft SEIR is available for review at the City's three Library Branches located :

- Main Branch, 25480 Alessandro Boulevard
- Mall Branch, 22500 Town Circle
- Iris Plaza Branch, 16170 Perris Boulevard

During the public comment period, written comments from the general public, organizations, and agencies on the Draft SEIR's accuracy and completeness may be submitted to the lead agency. Because of time limits mandated by state law, comments should be provided in writing no later than 5:30 p.m. on **July 15, 2024**. Please send all comments via regular mail or email to:

Kirt Coury, Contract Planner
City of Moreno Valley, Community Development Department
14177 Frederick Street, Moreno Valley, California 92553
planningnotices@moval.org

For additional information, please contact Kirt Coury, Contract Planner, at 951.413.3206 or planningnotices@moval.org

3.4.1 Discretionary Actions

The proposed Project would require approval of the following discretionary actions by the Moreno Valley City Council, which are submitted and processed concurrently:

1. **Specific Plan Amendment (SPA) (PEN 23-0109) –** The Aquabella SPA (Appendix A) would update and modify previous Specific Plan No. 218 to take advantage of the "center city" location and to establish a prominent destination for area residents and workers to live and recreate within a vibrant hub for the City and region. The SPA is needed to provide additional housing opportunities for residents and area workers and families seeking to take advantage of the site's location within central Moreno Valley, proximity to major job centers, efficient transportation network, sustainable lake features, and other amenities. The SPA would provide updated development standards and design guidelines for the further proposed development within the Project site and add one approximately 10-acre parcel to the eastern boundary of the Project site (APN: 486-310-014).
2. **General Plan Amendment (GPA) (PEN 23-0127) –** A GPA would be required to (a) change the 2040 General Plan Land Use & Community Character Element Table LCC–1, Development Potential and Jobs-Housing Balance, and related text, to update projected housing and job numbers to include the Project; (b) change the 2040 General Plan Table LCC-3, Downtown Center Illustrative Development Program (Net New Development 2020-2040), to reflect the updated Downtown Center development program by including the Project; and (c) change 2040 General Plan Map LCC-4, General Plan Land Use, to reflect the land use designation change of the approximately 10-acre parcel on the eastern boundary of the Project site (Assessor's Parcel No. 486-310-014) from R5 Residential to Downtown Center (Aquabella Specific Plan).

If the 2006 General Plan is operative at the time of approval, the Project would require a GPA to amend the 2006 General Plan, Land Use Map, Figure 2-2 to accommodate the Project.

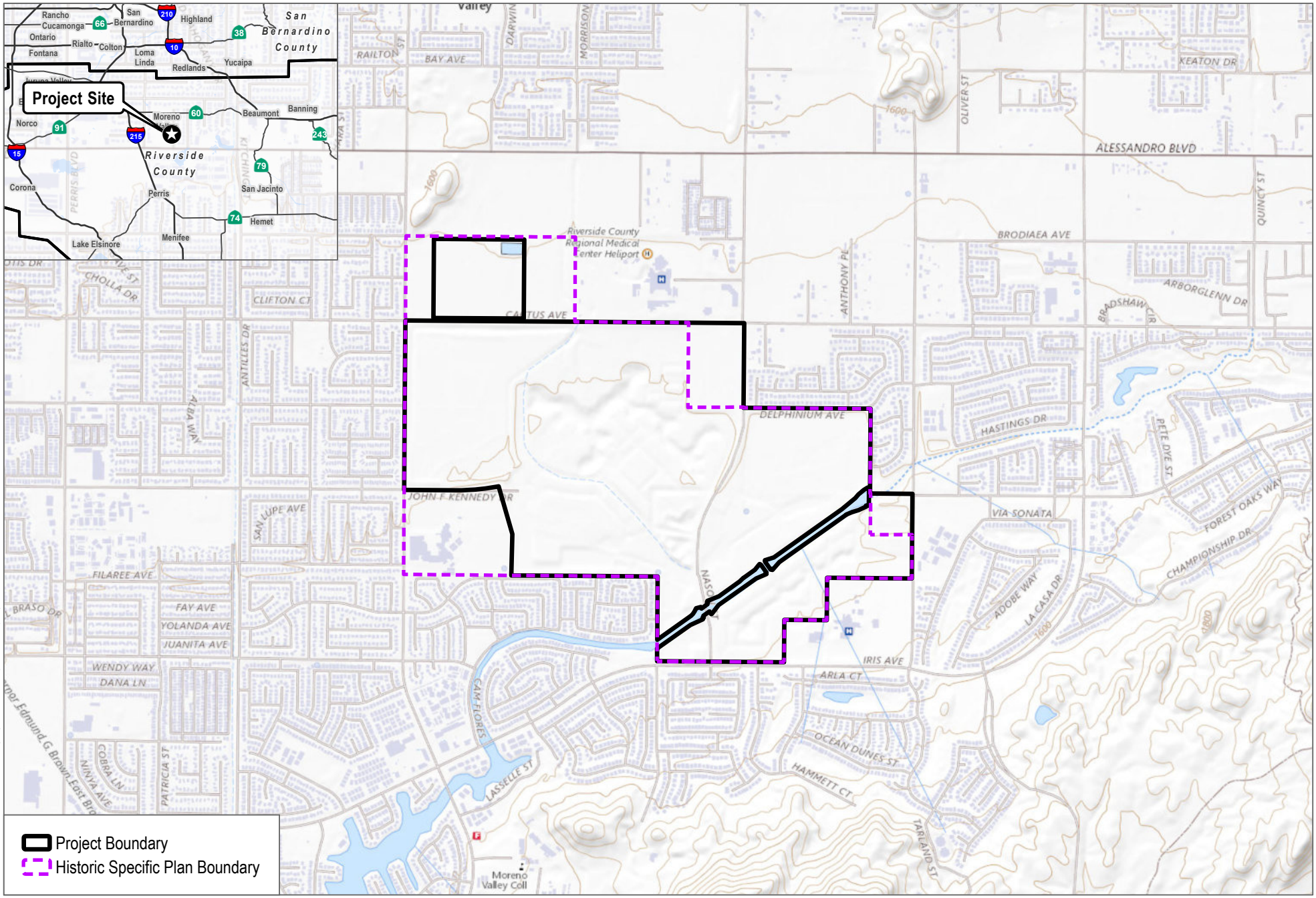
3. **Change of Zone (CZ) (PEN 24-0041) -** A proposed change of zone would rezone the approximately 10-acre parcel on the eastern boundary of the Project site from Residential 5 (R5) District to DC-SP (SP 218) in order to incorporate the parcel into the Project boundary, at which point it would be subject to the zoning, design, and development requirements therein.
4. **Subsequent Environmental Impact Report Certification (PEN 23-0111) –** Certification of this SEIR, which has been prepared in conformance with CEQA to ensure that the incremental environmental impact changes between the Project and the previous Specific Plan are analyzed and considered and that all feasible and reasonable mitigation measures or alternatives are implemented to reduce the identified significant impacts. Overriding considerations will be considered by the City. The preparation and review process of the SEIR requires public notification, stakeholder input, and community participation.
5. **Tentative Tract Map No. 38850 (PEN 23-0118)** - The Tentative Tract Map would provide the subdivision plans for the Aquabella Specific Plan area for finance and conveyance purposes. The Tentative Tract Map will consolidate the existing 10 parcels and create an estimated 26 new parcels.
6. **Development Agreement (PEN 23-0119) -** The Development Agreement would be a written agreement between the Project applicant and the City in order to specify the respective obligations of the parties.

3.4.2 Subsequent Discretionary and Ministerial Actions

Additionally, implementation of the proposed Project may require the applicant to obtain approvals, permits, licenses, certifications, or other entitlements from various federal, state, and local agencies including, but not limited to, the following:

- **State Water Resources Control Board:** National Pollutant Discharge Elimination System Permit, General Construction Activity Stormwater Permit, including Stormwater Pollution Prevention Plan
- **Santa Ana Regional Water Quality Control Board:** Clean Water Act Section 401 Permit – Water Quality Certification
- **Department of Toxic Substance Control:** Permit to manage and transport hazardous waste products
- **City of Moreno Valley:** Grading permit, building permit

Under CEQA, a public agency other than a lead agency that has discretionary approval power over aspects of a project is considered a "responsible agency" (14 CCR 15381). If the City approves the proposed Project, subsequent implementation of various project components could require discretionary approval authority from responsible agencies that may include, among others: Santa Ana Regional Water Quality Control Board, State Water Resources Control Board, California Department of Fish and Wildlife, South Coast Air Quality Management District, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers.



SOURCE: USGS National Map 2024

Sunnymead Quadrangle - Township 3S Range 3W Sections 15, 16, 21, 22

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0 500 1,000 Feet

FIGURE 3-1

Project Location

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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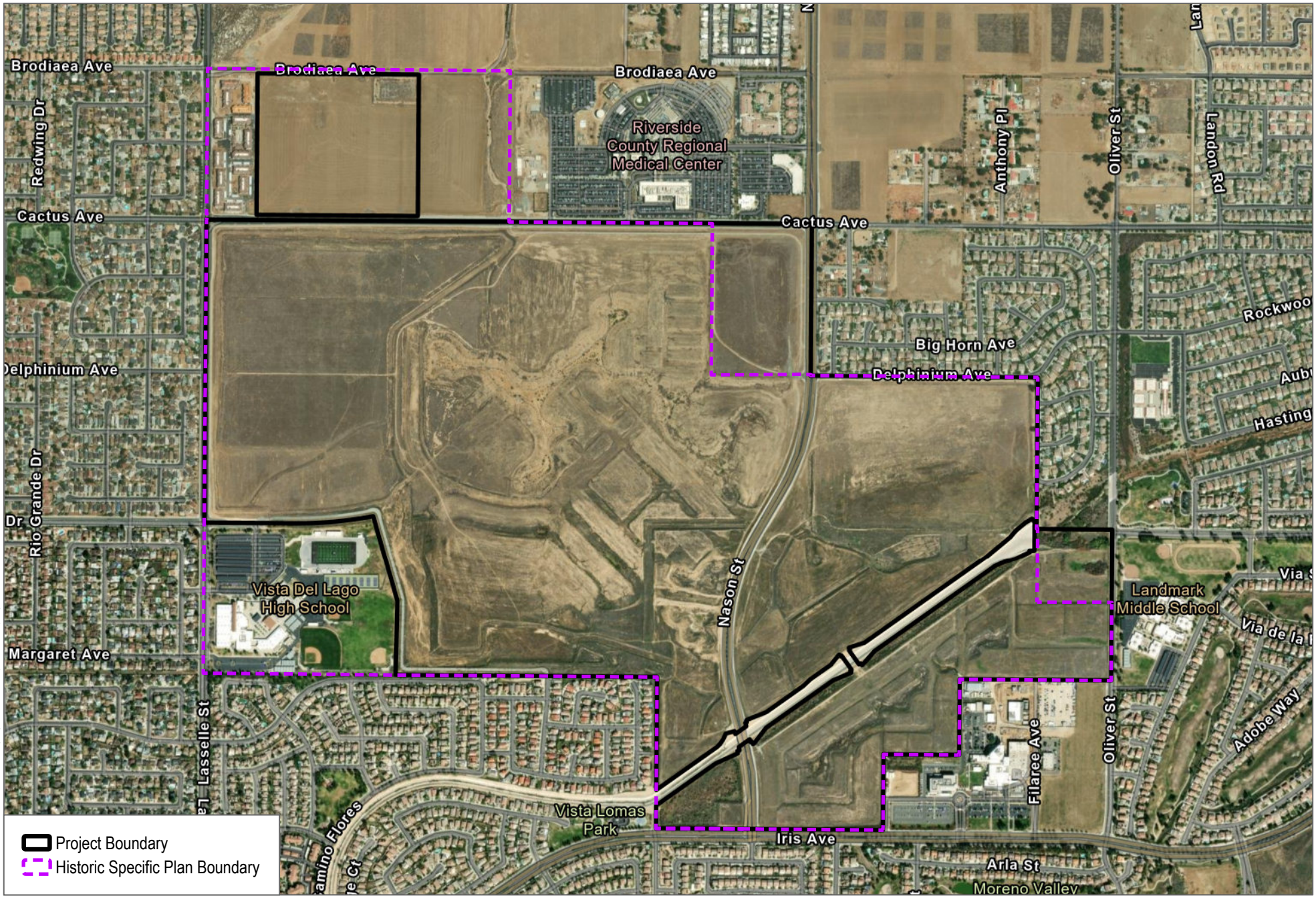

SOURCE: Maxar 2022

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0 500 1,000 Feet

FIGURE 3-2

Project Site

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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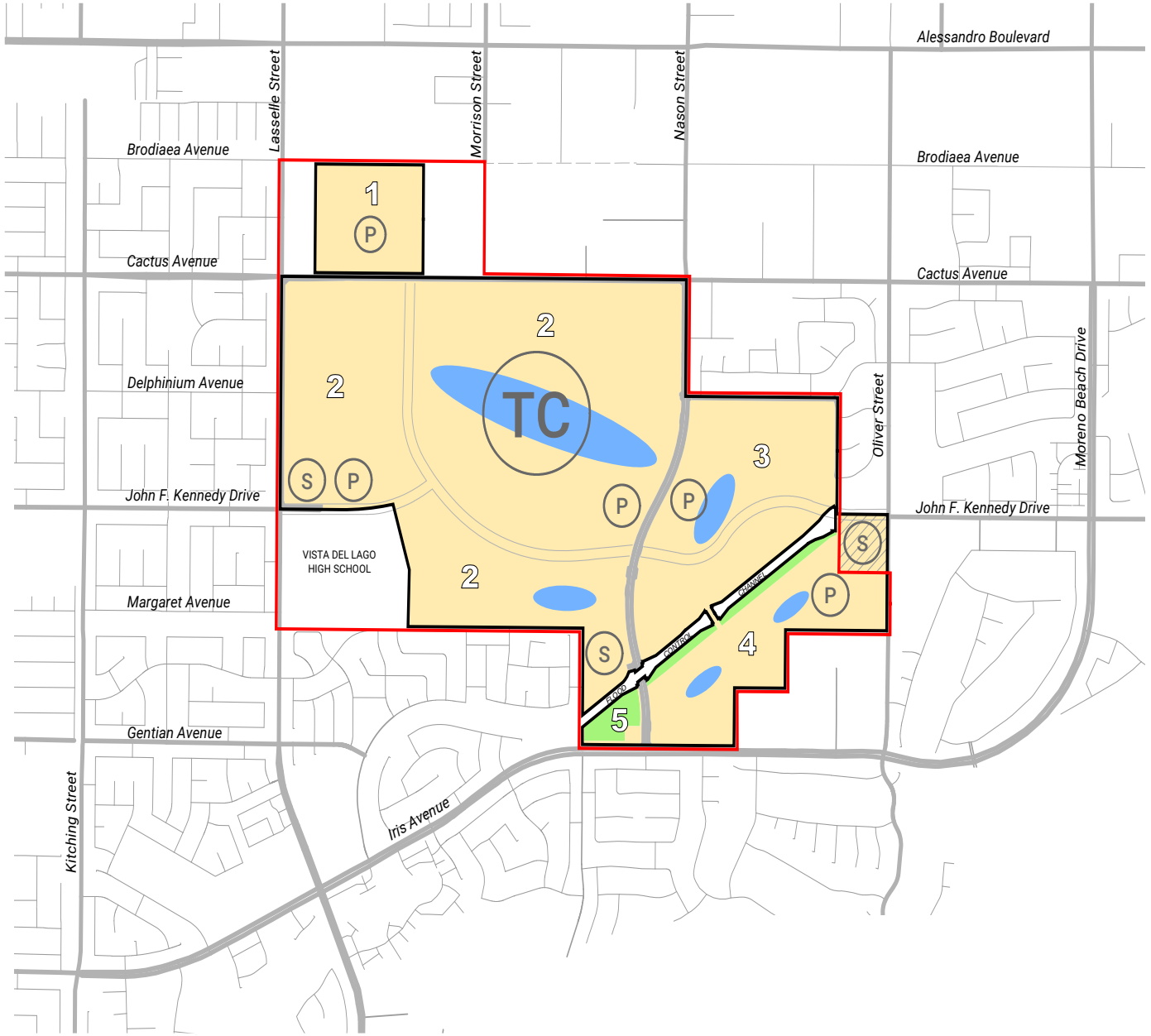

LEGEND:

- High Density Residential (HDR) — Allows up to 50 du/ac max.
- Open Space
- Existing Roads
- Specific Plan Boundary — 770.0 Acres
- Specific Plan Amendment Boundary — 668.6 Acres
- Specific Plan Amendment Parcel Added — 10.0 Acres

Floating Land Use:	Approximate Acres:	
Lake	40 Acres	80 Park Acres
Park	40 Acres	
Town Center	25 Acres	
School	40 Acres	
Conceptual Circulation	30 Acres	

SOURCE: Aquabella Specific Plan Amendment, 2024

FIGURE 3-3

2024 Land Use Plan

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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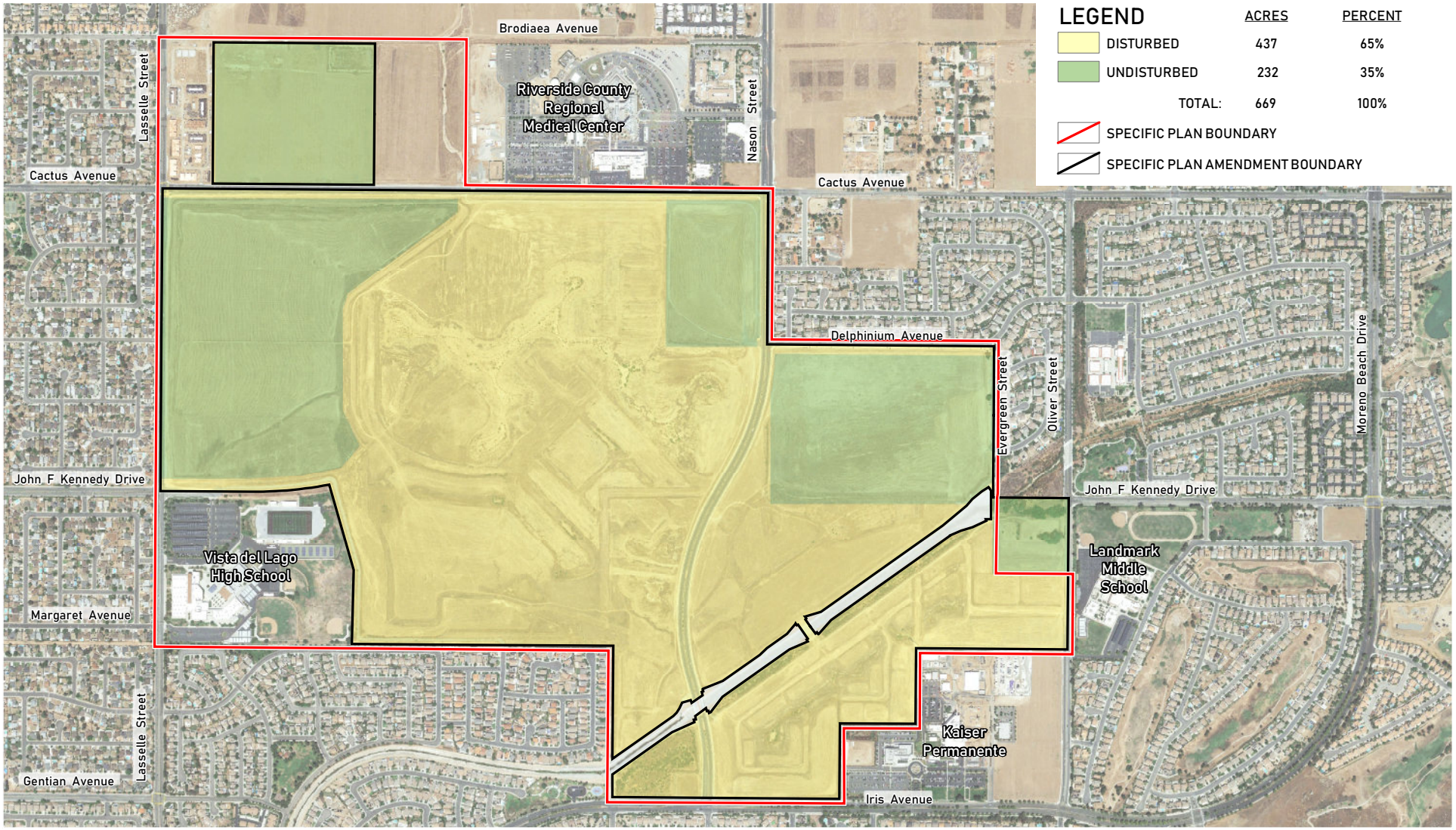

SOURCE: Aquabella Specific Plan Amendment, 2024

FIGURE 3-4

Previously Disturbed Land

Aquabella Specific Plan Amendment Project SEIR

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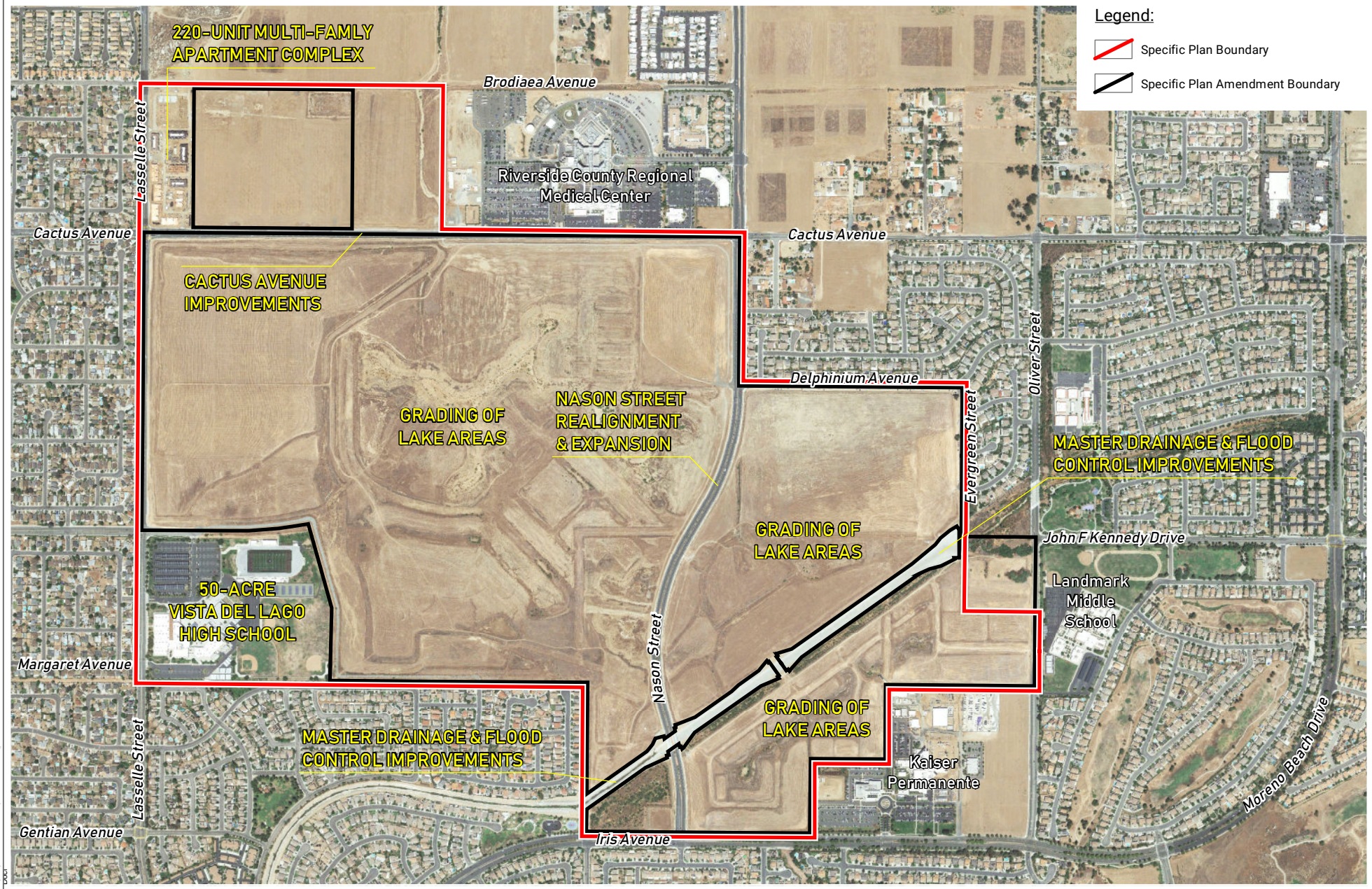

SOURCE: Aquabella Specific Plan Amendment, September 2023

FIGURE 3-5

Project Site Improvements

Aquabella Specific Plan Amendment Project SEIR

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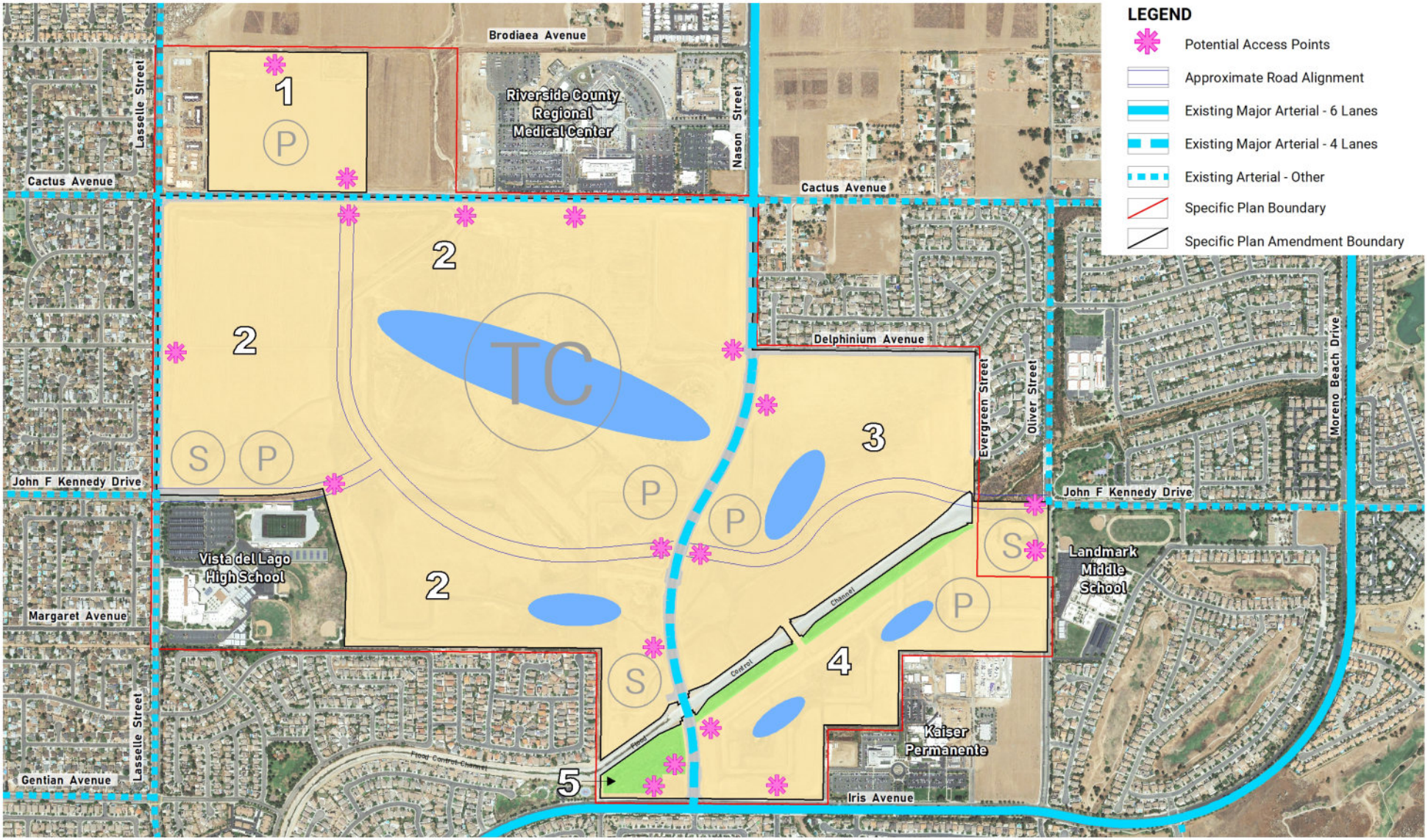

SOURCE: Aquabella Specific Plan Amendment, 2024

FIGURE 3-6

Conceptual Circulation Master Plan

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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4.0 Environmental Impact Analysis

Introduction to Environmental Analysis

The following sections analyze the potential significant environmental impacts that may occur as a result of implementation of the Aquabella Specific Plan Amendment Project (Project). Each environmental impact category analyzed herein includes a description of existing conditions, regulatory framework, significance thresholds or criteria, evaluation of potential impacts, mitigation measures (if applicable), and a conclusion of significance after mitigation (if applicable). Separately considered, but part of the required environmental analysis, are cumulative impacts that consider the impacts of the Project in conjunction with other past, present, and reasonably foreseeable future related projects. Cumulative impacts are addressed in Chapter 5.

The environmental issues addressed in this chapter are as follows:

- Aesthetics
- Agriculture and forestry resources
- Air quality
- Biological resources
- Cultural resources
- Energy
- Geology and soils
- Greenhouse gas emissions
- Hazards and hazardous materials
- Hydrology and water quality
- Land use and planning
- Mineral resources
- Noise
- Population and housing
- Public services
- Recreation
- Transportation
- Tribal cultural resources
- Utilities and service systems
- Wildfire

Approach to Environmental Impact Analysis

In accordance with California Public Resources Code Section 21166 and California Environmental Quality Act (CEQA) Guidelines Sections 15162 and 15163, the impact analysis focuses on the impacts that may result from substantial changes to the Project, its circumstances, or new information compared to the prior analyses. Among other things, the Subsequent Environmental Impact Report (SEIR) specifically addresses the potential impacts

resulting from the current Project's proposed land use changes compared to the previously approved projects and the increase in residential density to 15,000 homes. Differences between the previously approved projects and the current Project are shown in Table 3-1 in Chapter 3, Project Description, of the SEIR.

Each section covering an environmental resource is organized as follows:

- **Existing Environmental Conditions:** Provides an overview of the relevant physical environmental conditions at approximately the time of the publication of the Notice of Preparation for the Draft SEIR that could be affected by implementation of the Project in accordance with CEQA Guidelines Section 15125. The discussion of existing conditions includes consideration of improvements that were completed pursuant to the prior project approvals, including the 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR), and the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum). The existing conditions at the time of the Notice of Preparation act as the baseline for the SEIR analysis.
- **Regulatory Framework:** Identifies the laws, regulations, ordinances, plans, and policies relevant to each resource area.
- **Significance Criteria:** Identifies the criteria used to determine significance along with its source and an explanation of its application, if needed.
- **Impact Analysis**
  - **Summary of Previous Impact Analyses:** This section describes the analyses that occurred in the prior 1999 EIR, the 2003 Supplemental EIR, and the 2005 Addendum; the significance determination reached; and any mitigation adopted for the prior project approvals.
  - **Proposed Project Impact Analysis:** This section describes the methodology used to measure or determine impacts (e.g., modeling, site visit, data review). The methods that were used to evaluate the resource are applied and any effects that will occur as a result of Project implementation are discussed as they relate to the threshold and as compared to the prior analysis. The analysis includes consideration of on- and off-site improvements and direct and indirect impacts. A final statement of significance is included at the end of each analysis.
- **Significance of Impacts Before Mitigation:** This section reiterates conclusions related to whether a significant impact would occur before mitigation.
- **Mitigation Measures**
  - **Previously Adopted Mitigation Measures:** This section identifies measures from the prior project approvals that have been reviewed and determined to remain appropriate for the Project.
  - **Proposed Project Mitigation Measures for the 2024 SEIR:** This section identifies new or revised measures to mitigate significant impacts in accordance with CEQA by avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or compensating for the impact by replacing or providing substitute resources or environments.
- **Significance of Impacts After Mitigation:** This section summarizes the effectiveness of the proposed mitigation, including how and why the proposed measure would reduce impacts and whether impacts would be reduced to less than significant levels.

Cumulative Impact Methodology

This SEIR analyzes cumulative impacts of the Project together with other past, present, and reasonably foreseeable future projects producing related impacts, as required by CEQA Guidelines Section 15130. "Cumulative impacts" refers to two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts (14 CCR 15355). Cumulative impacts can result from individually minor but collectively significant impacts taking place over time.

Consistent with CEQA Guidelines Section 15130(a), the discussion of cumulative impacts in this SEIR focuses on significant cumulative impacts to which the proposed Project may contribute. According to Section 15130(b) of the CEQA Guidelines, the discussion of cumulative impacts "need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness." Additionally, Section 15130 identifies two basic methods for establishing a project's cumulative environment:

1. A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
2. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated region- or area-wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

With the exception of the impact analyses of air quality, greenhouse gas emissions, and transportation, this cumulative analysis uses the "list" approach to identify the cumulative setting. The cumulative impacts of air quality and greenhouse gas emissions have been evaluated using the summary of projections method because the geographic scope of such impacts is broad and area-wide or air basin-wide. The effects of past and present projects on the environment are reflected by the existing conditions in the Project area. Probable future projects are those in the Project vicinity that have the possibility of interacting with the Project to generate a cumulative impact (based on proximity and construction schedule) and either:

- are partially occupied or under construction
- have received final discretionary approvals
- have applications accepted as complete by local agencies and are currently undergoing environmental review
- are projects that have been discussed publicly by an applicant or that otherwise become known to a local agency and have provided sufficient information about the project to allow at least a general analysis of environmental impacts

Please refer to Chapter 5 for additional details about the cumulative impact methodology.

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4.1 Aesthetics

This section describes the existing aesthetic and visual conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and the 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR) found that implementation of the original SP 218 would not result in aesthetic impacts related to the obstruction of views, consistency with surrounding development, and consistency with lighting and development standards; impacts would be less than significant (City of Moreno Valley 1999b). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) did not discuss impacts to visual resources since this matter was previously addressed in the 1999 EIR. The 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum) found impacts would be consistent with those identified in the 1999 EIR (City of Moreno Valley 2005b).

The following analysis of the Project's potential aesthetics impacts is based on review of the City of Moreno Valley General Plan 2040 (2040 General Plan)[1]; the Final EIR for the MoVal 2040 General Plan: Moreno Valley Comprehensive Plan Update (2040 General Plan EIR); the City of Moreno Valley Municipal Code; visual simulations; applicable Project plans, documents, and the draft Aquabella Specific Plan Amendment (included as Appendix A to this Subsequent EIR); and other resources and information available to the public.

4.1.1 Existing Environmental Conditions

The Project site is located in the northwest corner of Riverside County and in the southeastern portion of the City of Moreno Valley (City). The Project site is composed of 668.6 acres of relatively flat land. On-site topography has been visibly altered by cut-and-fill grading for previously approved development consistent with the original SP 218 and the 2005 Aquabella SPA approvals and associated roadways, resulting in level building pads surrounded by cut-and-fill engineered surfaces. Approximately 437 acres, or 65% of the Project site, has been graded. The non-graded areas of the site primarily consist of non-native grassland. Approximately 6.2% of the site features native vegetation, most of which is within a linear strip of riparian revegetation that extends along the southern edge of the existing county flood control channel that crosses beneath Nason Street and traverses the southeastern portion of the site in a northeast–southwest alignment. The Project site is located in an urban area of the City and surrounded by primarily existing residential uses, educational/institutional uses, and medical facilities. Residential

[1] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (Sierra Club v. City of Moreno Valley, et al., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

uses surround the site at various densities, consisting of primarily single-family residences with multifamily development occurring to the north and southwest of the site. Educational facilities surrounding the site include Vista del Lago High School, Landmark Middle School, La Jolla Elementary School, and Moreno Valley College. The major medical campuses of the Riverside University Health System Medical Center (RUHSMC) and Kaiser Permanente Moreno Valley Medical Center bound the site to the north and south, both of which include multistory medical office and hospital buildings and support facilities. Lastly, the Project site is traversed by an existing four-lane, north–south road (Nason Street) and a northeast–southwest county flood control channel.

Representative photos of the Project site and surrounding area were taken from various public viewpoints to portray the existing visual environment. Figure 4.1-1 provides a map depicting the location and orientation of photographs. Photographs from key observation points (KOPs) and associated viewpoints are provided in Figures 4.1-2a through 4.1-2h and are described below.

KOP 1 (Figure 4.1-2a) provides an east oriented view of the Project site from the intersection of Delphinium Avenue and Lasselle Street. The KOP is located adjacent to the western boundary of the Project site. Views consist of the northbound and southbound lanes of Lasselle Street, roadside signage, a chain-link fence along the Project boundary, and grasses on the Project site. Distant views of the San Bernadino Mountains, Bernasconi Hills, and RUHSMC are available from KOP 1. Views of the Badlands mountain range (also known as the San Timoteo Badlands) from this viewpoint are partially obstructed by RUHSMC, trees, and intervening topography.

KOP 2 (Figure 4.1-2b) provides a southeast oriented view of the Project site from Cactus Avenue within the Project boundary. Views consist of the eastbound travel lane of Cactus Avenue, a chain-link fence along the Project boundary, and vegetation on the Project site. Distant views of residential development that lines the base of Bernasconi Hills and the Bernasconi Hills are available from this KOP.

KOP 3 (Figure 4.1-2c) provides a southwest oriented view of the Project site from Nason Street. The KOP is located along the eastern boundary of the Project site. Views consist of the northbound and southbound lanes of Nason Street, a center median containing vegetation, a light post, roadside signage, a chain-link fence along the Project boundary, and grasses on the Project site. Distant views of single-family residences along Lasselle Street and the Santa Ana Mountains are available at this KOP.

KOP 4 (Figure 4.1-2d) provides a southwest oriented view of the Project site from Nason Street. KOP 4 is located at the intersection of Delphinium Avenue and Evergreen Street. Views consist of the intersection of Delphinium Avenue and Evergreen Street, roadside signage, a chain-link fence along the Project boundary, a large tree, and grasses on the Project site. Distant views of the Bernasconi Hills and the Santa Ana Mountains are available at this KOP.

KOP 5 (Figure 4.1-2e) provides a west oriented view of the Project site form Nason Street. The KOP Is located within the center of the Project site. Views consist of the southbound lanes of Nason Street, a chain-link fence along the Project boundary, and grasses on the Project site. Distant views of the Santa Ana Mountains are available at this KOP.

KOP 6 (Figure 4.1-2f) provides a northeast oriented view of the Project site from Casa Encantador Road. Views consist of the westbound lanes of Casa Encantador Road, ornamental scrubs and trees lining Casa Encantador Road, roadside signage, a chain-link fence along the Project boundary, and grasses on the Project site. Distant views of the San Bernadino Mountains and RUHSMC are available from KOP 6. Views of the Badlands from this viewpoint are partially obstructed by residential development, RUHSMC, trees, and intervening topography.

KOP 7 (Figure 4.1-2g) provides a southwest oriented view of the Project site from Oliver Street. The KOP is located adjacent to the eastern boundary of the Project site. Views consist of the northbound and southbound lanes of Oliver Street, a chain-link fence along the Project boundary, grasses on the Project site, and the Kaiser Permanente Moreno Valley Medical Center at the base of Bernasconi Hills. Distant views of residential development that lines the base of Bernasconi Hills, Bernasconi Hills, and the Santa Ana Mountains are available at this KOP.

KOP 8 (Figure 4.1-2h) provides northeast oriented views of the Project site from Iris Street. This KOP is located adjacent to the southern boundary of the Project site. Views consist of the eastbound and westbound lanes of Iris Street, light posts, a center median, road signage. a chain-link fence along the Project boundary, grasses on the Project site, and the Kaiser Permanente Moreno Valley Medical Center at the base of Bernasconi Hills. Distant views of Bernasconi Hills and the San Bernadino Mountains are available at this KOP. Views of the Badlands from this viewpoint are partially obstructed by residential development, trees, and intervening topography.

Scenic Vistas and Scenic Resources

The 2040 General Plan identifies scenic resources and ridgelines within the City, but does not identify specific scenic vistas/vantage points. Views of the San Jacinto Valley, Box Springs Mountain, Bernasconi Hills, Moreno Peak, eroded hillsides of the Badlands area, Mystic Lake, San Bernardino Mountains, and the San Gabriel Mountains are identified as scenic in the 2040 General Plan. Identified scenic resources generally consist of topography and features that are visible from State Route (SR) 60 (City of Moreno Valley 2021a).

As identified in Map OSRC-3 of the 2040 General Plan, view corridors near the Project site are located along John F. Kennedy Drive and extend to the Bernasconi Hills; and along Cactus Avenue, extending to Moreno Peak (City of Moreno Valley 2021a). Scenic resources that are visible from the Project site and surrounding area include the Bernasconi Hills and Moreno Peak, as well as distant views of Box Springs Mountain, the San Bernadino Mountains, and San Jacinto Mountains. No scenic resources are identified by the 2040 General Plan on the Project site.

Visual and Community Character

The vacant yet previously graded and disturbed Project site is surrounded by developed uses, including residential uses to the south, east, and west; institutional uses to the north, south, and southeast; and undeveloped parcels to the north and southeast. Residential land uses surrounding the Project site vary in density, with most of the surrounding area consisting of one- and two-story single-family and multifamily residences, with some multistory multifamily development to the north. Institutional and educational land uses consist of the multistory RUHSMC and Kaiser Permanente Medical Center to the north and south, the Vista del Lago High School to the west, and La Jolla Elementary School and Landmark Middle School to the east along Oliver Street.

Made up of 8,800 acres, including the 1,800-acre Lake Perris, the Lake Perris State Recreation Area is located approximately 1 mile from the Project site's southern boundary.

Light and Glare

There are no existing light or glare sources on the Project site. The surrounding urbanized area is mostly developed. Lighting from existing development surrounding the Project site contributes to the existing nighttime environment. Similar to other developed areas, stationary sources of light and glare in the surrounding area include illuminated signage, glass in building façades, exterior and pole mounted lighting in commercial and residential areas, streetlights, and parking lot lighting. Field lighting associated with sports facilities at Vista del Lago High School

adjacent to the Project site and site lighting at neighborhood parks located east of the Project site and Oliver Street are other sources of lighting in the Project area under existing conditions.

4.1.2 Regulatory Framework

Federal

There are no aesthetic or visual impact federal regulations applicable to the Project.

State

California Scenic Highway Program

The California Scenic Highway Program was created in 1963 with the intent "to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment" (Caltrans 2023). The state laws that govern the Scenic Highway Program are Sections 260 through 263 of the California Streets and Highways Code. A highway may be designated scenic based on the natural landscape visible by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the views of the highway. The Scenic Highway Program includes both officially designated scenic highways and highways that are eligible for designation. It is the responsibility of local jurisdictions to apply for scenic highway approval, which requires the adoption of a Corridor Protection Program (Caltrans 2012). In addition, once a scenic highway is designated, the local jurisdiction is responsible for regulating development within the scenic highway corridor.

The nearest officially designated state scenic highway, SR-243, is located over 18 miles east of the Project site. The nearest eligible state scenic highway, SR-74, is located over 8 miles south of the Project site (Caltrans 2023).

Local

Moreno Valley General Plan 2040

The 2040 General Plan contains objectives and policies to preserve and enhance scenic and aesthetic resources. Specifically, the Land Use and Community Character and Open Space and Resource Considerations Elements include policies related to community character and preservation of scenic resources. The 2040 General Plan identifies landforms throughout the City as valued scenic resources, discussed under the Scenic Vistas and Scenic Resources subheading in this section.

Land Use and Community Character

The Land Use and Community Character Element describes the existing land use pattern within the City and provides a flexible framework to guide development and conservation in the coming years. The element includes standards for density, intensity, and goals, policies, and actions related to urban design, community character, and placemaking to guide City planning (City of Moreno Valley 2021b).

Policy LCC.2-1: Create a Downtown Center with a vibrant mix of uses that will serve as the primary hub and focal point of Moreno Valley economic and cultural engine in the region.

Policy LCC.2-8: Transform Nason Street and Alessandro Boulevard into grand boulevards with a distinctive, inviting character that announces arrival in Downtown Moreno Valley.

Policy LCC.2-22: Encourage new mixed-use and commercial development to incorporate visual quality and interest in architectural design on all visible sides of buildings through the following approaches:

- Utilizing varied massing and roof types, floor plans, detailed planting design, or color and materials;
- Maintaining overall harmony while providing smaller-scale variety; and
- Articulating building facades with distinctive architectural features like awnings, windows, doors, and other such elements.

Policy LCC.2-29: Design of public spaces should ensure they are:

- Lined with active uses at-grade and located near building entrances, windows, outdoor seating, patios, or balconies that overlook park spaces, and other areas with strong pedestrian activity.
- Be completely visible from at least one street frontage and as feasible, be at least 50% visible from a secondary street frontage.
- Primarily defined by adjacent buildings, which will contribute to the unity and environmental quality of the space.
- Be located at the same grade level as the public sidewalk when possible. Where changes in grade are an important element of the overall design and programming, clear and direct access from the public sidewalk should be accommodated, and universal accessibility provided.
- Reflect the design and placemaking elements of the surrounding area through the use of architectural styles, signage, colors, textures, materials and other elements.
- Be constructed with low impact and permeable paving materials to efficiently manage the stormwater and minimize the area's heat island effect.
- Connect to bike and pedestrian facilities and be a part of an interconnected pathway or parkway system where feasible.

Policy LCC.3-4: Strengthen the sense of arrival into Moreno Valley and the Downtown Center with gateway design at the locations shown on Map LCC-3. Gateway design elements shall include streetscape design, signage, building massing, and similarly themed design elements.

Policy LCC.3-5: Incorporate prominent corner architectural features, such as prominent entries or corner towers, on new development at key intersections or gateways.

Policy LCC.3-6: Maintain continuity in streetscape design along major streets and avenues that traverse the city north to south and east to west.

Open Space and Resource Considerations

The Open Space and Resource Considerations Element describes the existing open space and the conservation and preservation of resources in and around the City. This element includes goals and policies related to protection of natural resources, preserving cultural and scenic resources, water and energy efficiency, and waste reduction (City of Moreno Valley 2021a).

Policy OSRC.1-5: Design stormwater detention basins as multi-use amenities providing recreation, aesthetic value, and wildlife habitat along with flood control.

Policy OSRC.1-15: Expand the City's network of multi-use trails and provide connections from residential and commercial areas within the city to surrounding hillsides, ridgelines, open spaces and other scenic areas.

Goal OSRC-2: Preserve and respect Moreno Valley's unique cultural and scenic resources, recognizing their contribution to local character and sense of place.

Policy OSRC.2-4: Reduce or avoid visual intrusion from energy and telecommunications infrastructure. Encourage the undergrounding of utility lines wherever feasible and promote the use of "stealth" designs that locate wireless infrastructure on existing poles, buildings and other structures.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

Moreno Valley Municipal Code

Chapter 9.08, General Development Standards, Section 9.08.100: This section establishes regulations and standards for outdoor lighting to provide safety and security while protecting nighttime skies.

Chapter 9.10, Performance Standards, Section 9.10.110: This section regulates light and glare by requiring that no sign or lighting fixture shall create illumination that exceeds 0.5 footcandles minimum maintained on any adjacent property, whether the illumination is direct or indirect light from the source. Additionally, it is required that all lighting be designed to project downward and not create glare on adjacent properties.

Chapter 9.16, Design Guidelines, Section 9.16.020: This section contains design guidelines intended to promote quality site planning to ensure compatibility of surrounding development, while encouraging variety and distinctiveness in design and architectural styles. Municipal Code Section 9.16.020 specifies design principles relating to urban design, site planning, architecture, landscaping, lighting, and sign design.

4.1.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to aesthetics are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to aesthetics would occur if the Project would:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
3. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
4. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

4.1.4 Impact Analysis

4.1.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR determined aesthetics impacts would not be significant (City of Moreno Valley 1999b). The original SP 218 was determined to contribute to new source of light and glare due to the addition of street lighting at an existing vacant and unlighted area; however, this additional street lighting was consistent with the City standards. The development was determined to be consistent with the surrounding development's appearance and would not obstruct views from designated public vistas or scenic highways. Thus, no aesthetic impacts resulting from the original SP 218 were identified.

Mitigation

No mitigation was required.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR did not discuss impacts to aesthetic resources.

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum included a similar number of units as described in the 1999 EIR, along with development of upscale housing and amenities such as clubhouses, landscaping, and lakes. Aesthetic impacts were determined to be less than or equal to those described in the 1999 EIR (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was identified.

4.1.4.2 Project Impact Analysis

Threshold 1: Would the Project have a substantial adverse effect on a scenic vista?

Significant impacts would occur under this threshold if the Project were to substantially alter, obscure, or block public views of a designated scenic vista. The 2040 General Plan does not specifically identify scenic vistas/vantage points within the City; however, the 2040 General Plan identifies specific landforms and natural features within the

City as scenic resources. Such scenic resources identified in the 2040 General Plan include the San Jacinto Valley, Box Springs Mountain, Bernasconi Hills, Moreno Peak, eroded hillsides of the Badlands area, Mystic Lake, San Bernardino Mountains, and the San Gabriel Mountain (City of Moreno Valley 2021a). While the elevated vantage point available from mountain peaks would generally provide for views of the Moreno Valley floor, extending to the Project site and distant scenic resources, the Project site would be clearly visible from Bernasconi Hills and Moreno Peak. In addition, and due to the Project site being vacant, public roads bordering the Project site generally provide available views that extend across the Project site and to local and regional topography identified by the City as scenic resources.

As proposed, the Project would result in an increase of 12,078 dwelling units compared to the previously approved original SP 218 and 2005 Aquabella SPA, resulting in a density increase on the Project site. The residential development identified in the 2005 Aquabella SPA consisted mainly of one- and two-story single-family and multifamily buildings with density ranging from 5 or 15 dwelling units per acre (du/acre) to 20 du/acre. The Project changes would provide for multifamily residential development of the Project site and increase permitted density. Further, the Project's residential development would result in increased building scale/height, as compared to the one- to two-story residential development proposed in the 2005 Aquabella SPA.

To show the anticipated visual change and describe the visibility of the Project from the surrounding areas and potential scenic vistas, visual simulations were prepared using photographs from KOPs on public roads in the surrounding area. The KOPs and visual simulations prepared for the Project analysis depict existing conditions and anticipated visual change as experienced from representative locations. The locations of the selected KOPs are shown on Figure 4.1-1 and existing conditions and simulations from individual KOPs are shown on Figures 4.1-2a through 4.1-2h.

The KOP locations shown in the visual simulations provide foreground views and more distant landscape background views of the Project site and surrounding area. Many of the KOPs show views of the same scenic resources, including the San Bernardino Mountains (KOPs 1, 6, and 8), Bernasconi Hills (KOPs 1, 2, 4, 7, and 8), and the Badlands (KOPs 1, 6, and 8). The anticipated visual changes to these scenic resources from specific KOPs are evaluated below.

As shown in KOPs 1, 6, and 8, views of the San Bernardino Mountains are currently visible from surrounding roadways. Drivers, pedestrians, and cyclists traveling along Delphinium Avenue are generally provided direct and uninterrupted views extending to the distant San Bernardino Mountains and local Bernasconi Hills (see Figure 4.1-2a). In addition, eastbound users of Iris Street are provided relatively clear views to distant San Bernadino Mountains as they approach Nason Street and the Kaiser Permanente Moreno Valley Medical Facility from the west (see Figure 4.1-2h). As described above, KOPs 1, 6, and 8 demonstrate the Project's visual impacts to the San Bernadino Mountains. As shown in KOPs 1, 6, and 8, views of the San Bernadino Mountains from Delphinium Avenue (KOP 1), Casa Encantador Road (KOP 6), and Iris Street (KOP 8) would be completely obstructed by the Project's residences. The anticipated effect on views to the San Bernardino Mountains from these KOPs would be similar to that proposed in the 2005 Aquabella SPA and previously analyzed in the 2005 Addendum.

Views of the Bernasconi Hills are shown in KOPs 1, 2, 4, 7, and 8. KOPs 1 and 2 (Figures 4.1-2a and 4.1-2b) show that the Project's buildings along the eastern and northern boundary would block existing views to the Bernasconi Hills. KOP 4, 7, and 8 shows the Project's two-story residential development on the eastern portion of the Project site would partially block views to the Bernasconi Hills; however, the partial blockage experienced from this KOP would not be substantial given the existing blockage of this landform by existing trees and buildings at these viewpoints and the fact that some ridgelines would remain visible above the roofline of future residential

buildings. The anticipated effect on views of the Bernasconi Hills from KOPs 1, 2, 4, 7, and 8 would be similar to that proposed in the 2005 Aquabella SPA and previously analyzed in the 2005 Addendum.

Views of the Badlands are shown in KOPs 1, 6, and 8. KOPs 1, 6, and 8 show that the Project's residential structures would block existing views of the Badlands along Lasselle Street, Iris Street, and Casa Encantador Road. While the Project would result in a blockage of views of the Badlands, the anticipated effect would be similar to that proposed in the 2005 Aquabella SPA and previously analyzed in the 2005 Addendum.

While visual simulations prepared for the Project depict blockage of views to local and regional landforms identified by the City as scenic resources, mobile views to the Bernasconi Hills, San Bernardino Mountains, and the Badlands from foreground vantage points located on public roads adjacent to the Project site would have been partially to fully obstructed by the two-story buildings across the Project site previously evaluated and found to result in less than significant impacts to scenic vistas with the 2005 Aquabella SPA. While the Project would increase density at the Project site and develop larger-scale buildings compared to the 2005 Aquabella SPA, the Project would result in similar visual impacts to City-identified scenic resources/scenic vistas. Thus, impacts to scenic vistas would be similar to prior project approvals and **less than significant.**

Threshold 2: Would the Project substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The Project site is not located adjacent to, or in the vicinity of, a designated state scenic highway. The nearest eligible scenic highway, SR-74 between Interstate 5 and Blackburn Road, is located approximately 8 miles south of the Project site. The closest officially designated scenic highway, SR-243, is located over 18 miles east of the Project site. Due to distance and intervening elements/features including terrain, landscaping, and development, the Project site is not visible from the nearest eligible or officially designated state scenic highway. Given that the Project site is not located near an officially designated or eligible state scenic highway, as with the prior approvals, implementation of the Project would not substantially damage scenic resources within a state scenic highway. **No impact** would occur.

Threshold 3: Would the Project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would it conflict with applicable zoning and other regulations governing scenic quality?

The Project site is located in an urbanized area; thus, the first portion of this threshold related to changes in the visual character or quality of public views of the site and its surroundings does not apply to the Project's aesthetics analysis. California Public Resources Code Section 21071 defines an "urbanized area" as "an incorporated city that meets either of the following criteria: (1) has a population of at least 100,000 persons, or (2) has a population of less than 100,000 persons if the population of that City and not more than two contiguous incorporated cities combined equals at least 100,000 persons." As of 2020, the City had a population of approximately 208,634 people (USCB 2020; City of Moreno Valley 2021c. Thus, the City is considered an urbanized area per California Public Resources Code Section 21071 and CEQA.

Accordingly, this analysis considers whether the Project would conflict with applicable zoning and other regulations governing scenic quality.

Zoning

The Project Site is primarily designated as Downtown Center-Specific Plan (DC-SP), with the exception of the 10-acre parcel on the eastern boundary of the Project site, which is zoned Residential 5 (R5). The Project proposes a zone change that would rezone the parcel to Downtown Center-Specific Plan (DC-SP), SP 218, to add the 10-acre parcel into the Aquabella Specific Plan Amendment. The Project would be developed pursuant to the development regulations and design standards in the Aquabella Specific Plan Amendment, as well as those in the Moreno Valley Municipal Code, including, but not limited to, Section 9.13, Specific Plans, Section 9.07, Special Districts, and Section 9.03. Residential Districts. The development regulations in the Specific Plan and Municipal Code would ensure development would not conflict with zoning and other regulations governing scenic quality. As discussed in Section 4.11, Land Use and Planning, some minor deviations from the development standards of the Specific Plan may be permitted; such deviations would be required to obtain approval from the Community Development Director or designee, which would ensure the deviations would not result in a substantial conflict with relevant zoning or other regulations governing scenic quality. Impacts would be **less than significant**.

General Plan

The 2040 General Plan designates the Project site under the mixed-use designation of "Downtown Center (DC), Aquabella Specific Plan." The Project proposes a General Plan Amendment to allow for the Project's increased allowable residential density. Applicable policies regarding scenic quality within the City are included in the Land Use and Community Character Element and Open Space and Resource Conservation Element (City of Moreno Valley 2021a, 2021b). The Land Use and Community Character Element of the 2040 General Plan envisions the Downtown Center as a primary hub with taller buildings that help to distinguish the Downtown Center area from the surrounding area. The Land Use and Community Character Element also includes Table LCC-2, which outlines the development principles within the Downtown Center. Applicable policies related to scenic quality include policies related to roadway and gateways design, providing visual quality through design, and the preservation of scenic resources within the City. The Project's consistency with 2040 General Plan policies is discussed in detail in Table 4.11-1 in Section 4.11 and summarized below.

Consistent with 2040 General Plan policies governing scenic quality, the Project would provide key visual gateway entry points from Nason Street and Cactus Avenue that create a sense of arrival within the Downtown Center area of the City and the Project. Clear visual entries would be created through the installation of entry monuments, landscaping with an inviting plant palette, hardscaping, and multi-use meandering trails adjacent to Nason Street, consistent with Policies LCC.2-8, LCC.3-4, and LCC.3-5. As shown in KOP 5 (Figure 4.1-2e), Project design includes a large centrally located water feature/lake surrounded by a series of meandering trails. The water feature/lake is deliberately included as a distinct feature that distinguishes the Project and Downtown Center area from the surrounding area and provides a clear element of community interest. As shown in KOPs 2, 5, 6, and 7 (Figures 4.1-2b, 4.1-2e, 4.1-2f, and 4.1-2g), and consistent with Policy LCC.3-6 and Table LLC-2, proposed streets within and along the perimeter of the residential villages would include landscaping that would contribute to a visually pleasing "urban forest" character of leafy canopy trees. Further, Downtown Center streets would be designed with enhanced streetscape, including landscaped medians, crosswalks, café seating, and retail patios to help distinguish the Project from lower-density residential neighborhoods in the surrounding area and create a visually distinct design aesthetic.

The creation of vibrant public places including a Downtown Center, development of new mixed-use development that incorporates visual quality and interest in architectural design, and encouragement of high-quality development that is sensitive to surrounding context is provided for in 2040 General Plan Policies LCC.2-1,

LCC.2-22, and LLC.2-29 and in Table LCC-2 (Downtown Center Development Principles: Land Use and Urban Design). The Project would provide public gathering areas in the Downtown Center, including the lake and lake promenade and the parks, which would be defined and complimented by the adjacent buildings. Available views across the lake to the mountains beyond would also be a defining characteristic of the Downtown Center area. The Project's landscape and architectural design guidelines for the mixed-use Downtown Center include the encouragement of varied massing and roof types (and floor plans) and articulating facades with unifying features to (1) ensure visual quality and interest in architectural design and (2) achieve overall harmony within the Downtown Center area. As shown in KOPs 2, 4, 5, 6, and 7 (Figures 4.1-2b, 4.1-2e, 4.1-2f, and 4.1-2g), varied massing and roof types, planting design, color, and materials are envisioned for future Downtown Center development; consistent with Table LCC-2 principles for land use and urban design, these elements would help to establish a distinct visual identity and heighten visual interest. Further, building design would incorporate varying rooflines, stepped parapets, hip or vaulted roofs, domes, towers, and/or other distinct roof forms to avoid a monotonous appearance. Building facades would include storefront windows, outdoor seating and dining, awnings or canopies, decorative lighting, columns or pilasters, and other elements to create visual interest and break down the apparent scale of development. The Project design of public spaces, mixed use, and commercial development would be consistent with Policies LCC.2-1, LCC.2-22, and LLC.2-29, and Table LCC-2.

Similar to the 2005 Aquabella SPA and consistent with Policy OSRC.1-5, the Project would include a lake system on site that would act as stormwater infrastructure and that would add aesthetic value and interest to the Project site. The proposed lake feature is depicted in KOP 5 (Figure 4.1-2e). As shown in the figure and consistent with OSRC Policy 1-15, the Project would provide a scenic trail system and bike lanes that would connect the on-site residential and commercial areas to scenic areas and open spaces. Consistent with Policy OSRC.2-4, the Project would reduce aesthetic impacts from infrastructure by undergrounding electrical lines on site. Lastly and consistent with Goal OSRC.2, the Project would develop the site in a manner complimentary to adjacent uses and would provide attractive architecture, gateway entry points, parks and open space, and the lake complex to create a unique sense of place.

Thus, similar to the prior project approvals, the Project would not conflict with regulations or zoning governing scenic quality. Compliance with development regulations and design standards in the Aquabella Specific Plan Amendment would ensure consistency with the 2040 General Plan and zoning regulations and policies governing scenic quality. Impacts would be similar to the 2005 Aquabella SPA and be **less than significant**.

Threshold 4: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Lighting impacts are typically associated with the use of artificial light during the evening and nighttime hours. Artificial light may be generated from point sources and from indirect sources of reflected light. Uses such as residences, hospitals, and hotels are considered light sensitive since they are typically occupied by persons who have expectations for privacy during evening hours and who are subject to disturbance by bright light sources. Wildlife habitat areas may also be considered light sensitive if the introduction of light sources would compromise the quality and function of a habitat area.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Daytime glare generation is common in urban areas and is typically associated with mid- to high-rise buildings with exterior façades largely or entirely composed of highly reflective glass or mirror-like material from which the sun can reflect at a low angle in the periods following sunrise and prior to sunset. Glare can also be

produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare generation is typically related to either moving vehicles or sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. Glare-sensitive uses generally include residences and transportation corridors.

As described above, the Project site is currently undeveloped and is surrounded by residences and two medical centers/hospitals. Surrounding residential and institutional land uses contain lighting typical of an urban setting, including, but not limited to, street lighting, signage lighting, and security lighting. Similar to the previously approved 2005 Aquabella SPA, development of the Project site would introduce new sources of light and glare to the Project site. Sources of lighting associated with the Project would be typical of residential and commercial uses, including streetlights, interior roadway and walkway/pathway lighting, and exterior mounted and interior lighting. Potential sources of glare would include windows on the Project's residential and commercial uses. As described in the Specific Plan, lighting fixtures on site would be properly shielded to prevent off-site glare and minimize light pollution. Spot fixtures would be directed downward and/or upward to illuminate specific items or areas within the site, not outward from the Project area. The Project would be required to present exterior lighting plans for parking and other site areas are to demonstrate compliance with Section 9.08.100, Lighting, of the City's Municipal Code. Therefore, Project lighting sources would be similar to existing sources in the surrounding area and would comply with regulations governing lighting to confine light within the site and prevent glare onto adjacent properties.

To minimize the impacts of glare and reflectivity as a result of the new development, the Specific Plan design guidelines provide for clear glazing of windows and limited use of reflective materials for accent elements. Photovoltaic solar panels would be provided at the site. However, such panels are designed to absorb light, not reflect it, and would be coated with anti-reflective materials to maximize light absorption. In addition, solar panels face upward, resulting in a small likelihood of affecting nearby residents on the ground or in surrounding developments. Accordingly, the Project would not introduce a new substantial source of light or glare compared to the prior approvals, and impacts would remain **less than significant**.

4.1.5 Significance of Impacts Before Mitigation

Threshold 1: Adverse Effect on a Scenic Vista

The Project would not result in an adverse effect on a scenic vista, and as such, impacts would be **less than significant.**

Threshold 2: Damage Scenic Resources near a State Scenic Highway

The Project is not located near a state scenic highway. Because development of the Project site would not be visible from a state scenic highway, **no impact** would occur.

Threshold 3: Conflict with Regulations Governing Scenic Quality

The Project was determined to be consistent with the City's Zoning Code and 2040 General Plan goals and policies governing scenic quality. Thus, impacts would be **less than significant.**

Threshold 4: Lighting and Glare

The Project would not introduce a substantial source of light or glare to the Project site, and as such impacts would be **less than significant.**

4.1.6 Mitigation Measures

4.1.6.1 Previously Adopted Mitigation Measures

1999 EIR

No feasible mitigation was identified.

2003 Supplemental EIR

This topic was not included in the 2003 Supplemental EIR.

2005 Addendum

No feasible mitigation was identified.

4.1.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

The Project did not identify any new impacts related to visual resources, and impacts would be less than significant. No mitigation is required.

4.1.7 Significance of Impacts after Mitigation

Threshold 1: Adverse Effect on a Scenic Vista

The Project would not result in an adverse effect on a scenic vista, and as such, impacts would be **less than significant.**

Threshold 2: Damage Scenic Resources near a State Scenic Highway

The Project is not located near a state scenic highway. Because development of the Project site would not be visible from a state scenic highway, **no impact** would occur.

Threshold 3: Conflict with Regulations Governing Scenic Quality

The Project was determined to be consistent with the City's Zoning Code and 2040 General Plan goals and policies governing scenic quality. The Project is also consistent with the City's prior 2006 General Plan goals and policies (see Appendix A). Thus, impacts would be **less than significant.**

Threshold 4: Lighting and Glare

The Project would not introduce a substantial source of light or glare to the Project site, and as such impacts would be **less than significant.**

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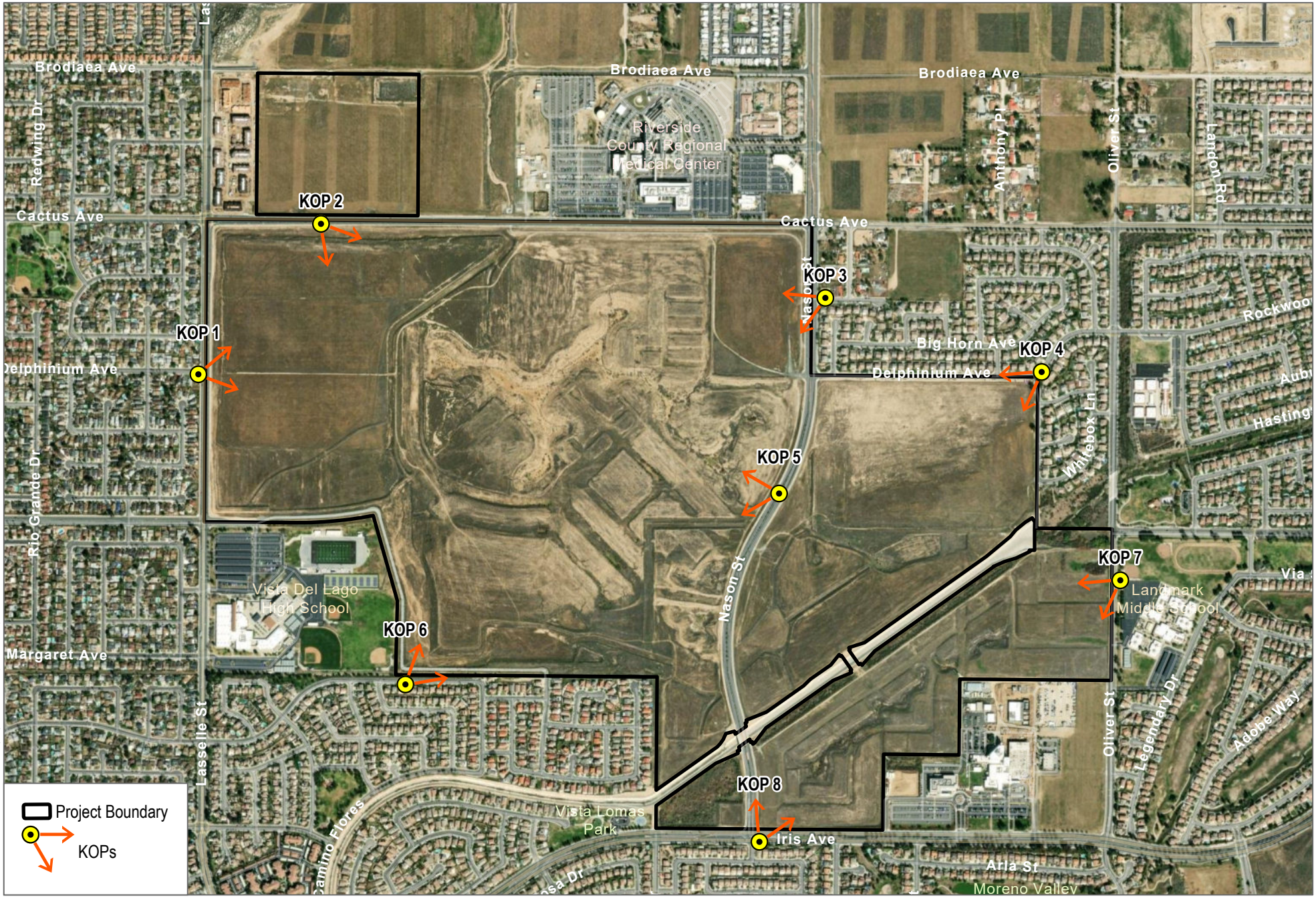

SOURCE: Maxar 2022

FIGURE 4.1-1

KOPs

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

DUDEK

0 500 1,000 Feet

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2a

KOP 1

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2b

KOP 2

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2c

KOP 3

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2d

KOP 4

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2e

KOP 5

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2f

KOP 6

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2g

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Existing Conditions

Proposed Conditions

FIGURE 4-1.2h

KOP 8

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4.2 Agriculture and Forestry Resources

This section describes the existing agriculture and forestry conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and the 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR) found that implementation of the original SP 218 would result in the permanent loss of important (including prime) farmlands, which would result in a significant and unavoidable impact related to the conversion of 485 acres of farmland (City of Moreno Valley 1999b). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) did not discuss impacts to agricultural and forestry resources. The 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum) found impacts would be consistent with the 1999 EIR (City of Moreno Valley 2005b).

This section is based on data gathered from the California Department of Conservation Farmland Mapping and Monitoring Program, the City of Moreno Valley General Plan 2040 (2040 General Plan)[1], the Project's prior environmental documents, and other publicly available data and documents.

4.2.1 Existing Environmental Conditions

The City of Moreno Valley (City) has a long history of agricultural use dating back to when Moreno Valley was originally settled in the 1850s. However, a variety of economic factors have caused farming to decrease substantially over recent decades, including the high cost of land, the high cost of water and energy, fragmented ownership patterns, and market conditions. Agriculture is no longer considered a strong component of the City's economy (City of Moreno Valley 2021a).

The Conservation Element of the City's 2006 General Plan identified agricultural production as an interim use (City of Moreno Valley 2006). However, agricultural activities have continued to decline and transition to other urban and rural uses. The 2040 General Plan identifies no land in the City as Agriculture on the City's land use maps, and remaining farming uses in the City are limited to intermittent farming activities north of State Route 60 in the northeast portion of the City. The area surrounding the Project site does not include farming. It is identified as urban and built-up land, consisting predominantly of housing of varying densities, two major medical centers, and educational uses (DOC 2018; City of Moreno Valley 2021b).

Historically, the Project site supported agricultural production and research until the late 1980s. The University of California purchased the 840-acre property known as Moreno Valley Field Station (including the Project site) in 1962 to conduct agricultural experimental work to foster field research and growing facilities. The property was

[1] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

used for agriculture studies through the 1980s. In the late 1980s when the University of California moved their studies to a research station located in Coachella Valley, the university sold the land to owners with other intended uses, including 80 acres to the County of Riverside for the Riverside County Regional Medical Center and 25 acres for an adjacent commercial site. At that time, the original SP 218 set forth a plan to develop approximately 710 acres of the remaining 760-acre site with residential mixed uses. The site has been out of agricultural production for approximately 40 years since this time in the late 1980s.

The majority of the Project site (65%) has been graded for development consistent with the original SP 218 and 2005 Aquabella SPA approvals. Under the 2040 General Plan land use designation, almost all of the Project site is designated Downtown Center-Specific Plan (DC-SP), which envisions development of a vibrant mix of residential, business, entertainment, cultural, and civic uses to activate the City's Downtown Center.

The California Department of Conservation identifies the entirety of the Project site as Farmland of Local Importance through their Farmland Mapping and Monitoring Program (DOC 2018). Farmland of Local Importance is described as farmland important to the local agricultural economy, as determined by the County Board of Supervisors and a local advisory committee. The Project site does not include any land currently under Williamson Act contract and does not include any Unique Farmland, Prime Farmland, or Farmland of Statewide Importance (City of Moreno Valley 2021a; DOC 2018).

The underlying materials at the Project site consist of varying depths of undocumented fill overlaying alluvial deposits. A geotechnical report (Appendix C to this Subsequent EIR), further discussed in Section 4.7, Geology and Soils, identified intermittent deposits of undocumented fill related to past agriculture activities present on site. In the southeast portion of the site, buried and open dump sites are present. These dump sites were used to illegally dump refuse/household-type waste.

4.2.2 Regulatory Framework

Federal

There are no federal regulations regarding agriculture and forestry resources that would apply to the proposed Project.

State

Farmland Mapping & Monitoring Program

The California Department of Conservation, Division of Land Resource Protection, identifies important farmland throughout the state through the Farmland Mapping and Monitoring Program in order to provide consistent and impartial data regarding California's agricultural resources. The Farmland Mapping and Monitoring Program prepares, updates, and maintains Important Farmland Series Maps as defined in Section 65560(f) of the Government Code and prepares and maintains an automated map and database system to record and report changes in the use of agricultural lands every 2 years (DOC 2023). Agricultural land is rated based on soil quality and irrigation status. The ratings and their definitions are described below based on the California Important Farmland Finder (DOC 2018):

> **Prime Farmland:** Irrigated land with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season,

and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.

Farmland of Statewide Importance: Irrigated land similar to Prime Farmland that has a good combination of physical and chemical characteristics for the production of agricultural crops. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.

Unique Farmland: Lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. Farmland of Local Importance in Riverside County, including the City of Moreno Valley, is defined as:

- Lands with soils that would be classified as Prime Farmland and Farmland of Statewide Importance but lack available irrigation water.
- Lands planted with dry land crops of barley, oats, and wheat.
- Lands producing major crops for Riverside County but that are not listed as Unique crops. These crops are identified as returning one million or more dollars on the 1980 Riverside County Agriculture Crop Report. Crops identified are permanent pasture (irrigated), summer squash, okra, eggplant, radishes, and watermelons.
- Dairy lands, including corrals, pasture, milking facilities, hay and manure storage areas if accompanied with permanent pasture, or hay land of 10 acres or more.
- Lands identified by city or county ordinance as Agricultural Zones or Contracts, which includes Riverside City “Proposition R” lands.
- Lands planted with jojoba, which are under cultivation and are of producing age

Grazing Land: Land on which the existing vegetation is suited to the grazing of livestock. This category is used only in California and was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

Other: Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

The information is available publicly at the California Important Farmland Finder interactive website.[2]

[2] https://maps.conservation.ca.gov/DLRP/CIFF/

California Land Conservation Act

The California Land Conservation Act of 1965, better known as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use for the length of the contract. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

Local

General Plan

The City's 2040 General Plan acknowledges that the viability of farming has diminished in the City due to the high cost of water and rising cost of land. The 2040 General Plan identifies no land in the City as Agriculture on the City's land use maps. Where farmland remains in production, the Open Space and Resource Conservation Element of the General Plan allows its interim, continued use until its conversion to urban uses (City of Moreno Valley 2021a):

> Policy OSRC.1-6: Where agriculture exists within the City limits, allow uses to continue until urban development occurs on these properties and support appropriate commercial activities (i.e. horse stables, agri-tourism) in rural areas in and around Moreno Valley.

4.2.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to agriculture and forestry resources are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to agriculture and forestry resources would occur if the Project would:

1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract.
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g]).
4. Result in the loss of forest land or conversion of forest land to non-forest use.
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

4.2.4 Impact Analysis

4.2.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR found that although the subject property was no longer considered usable for agricultural uses by the owner (University of California) and the development of the agricultural land was not considered premature by the City, implementation of the original SP 218 would result in the permanent loss of important (including prime) farmlands. The 1999 EIR identified a significant and unavoidable impact related to the conversion of 485 acres of farmland including areas with prime soils.

The 1999 EIR did not specifically analyze the thresholds related to zoning and the Williamson Act, forest land, or other conversion of agricultural and forest land to non-agricultural and non-forest land.

Mitigation

The 1999 EIR concluded no mitigation was available and determined the impact would remain significant and unavoidable.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR did not discuss impacts to agriculture and forestry resources.

Mitigation

No mitigation was identified.

2005 Addendum

Analysis

Impacts to agricultural resources were determined to be consistent with the 1999 EIR.

Mitigation

No additional mitigation was identified.

4.2.4.2 Project Impact Analysis

Threshold 1: Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

As described in Section 4.2.1, there is no land at the Project site or within off-site improvement areas designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2018). Thus, the Project would not directly convert farmland to non-agricultural use. This is a reduced impact compared to the original SP 218, as the site no longer includes designated Prime farmland.

Further, the Project would not result in the indirect conversion of farmland, for example, as a result of development pressures on nearby designated farmland (defined as Prime, Unique, or Statewide Farmland). First, the Project site has been out of agricultural production since the 1980s, has been planned for residential development since the 1990s, and was graded for development in the early 2000s (see Section 4.2.1). Second, the Project site is in an infill area surrounded by urbanized, developed land. There is no designated Prime, Unique, or Statewide Farmland on the Project site or the Project vicinity. Third, the 2040 General Plan and Zoning identifies the area encompassing the site for Downtown Center, urban development, as shown in Figure 2-3, 2040 General Plan Land Use Designations, and Figure 2-4, Zoning Designations. Fourth, no land in the City is designated for continued agricultural use, as farmland conversion to urban uses has been and continues to be driven by economic and environmental (irrigation) factors. Accordingly, the current Project would not directly or indirectly result in the conversion of Prime, Unique, or Statewide Farmland.

For the above reasons, impacts would be reduced compared to the prior project approvals and would be **less than significant.**

Threshold 2: Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The City does not contain areas zoned for agricultural uses (City of Moreno Valley 2021a). Additionally, the Project site is not subject to a Williamson Act contract. As such, **no impact** would occur.

Threshold 3: Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?

The City does not contain land zoned for forestland, timberland, or timberland production (City of Moreno Valley 2021a). The Project site is not zoned for forestland, timberland, or timberland production. As such, the current Project would have **no impact** on existing zoning for forest land, timberland, or timberland zoned timberland production.

Threshold 4: Would the Project result in the loss of forest land or conversion of forest land to non-forest use?

The Project site is composed of 668.6 acres of relatively flat land that does not contain forest resources. Further, approximately 437 acres of the Project site have been previously graded. There is no land designated as forest land on the Project site or in the City. As such, the current Project would not result in the loss of forest land or conversion of forest land to a non-forest use. **No impact** would occur.

Threshold 5: Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

As described under the above thresholds, the Project site is not anticipated to involve other changes in the existing environment that could result in the conversion of farmland (defined as Prime, Unique, or Statewide Farmland) to non-agricultural use or forest land to non-forest use. The site has been out of agricultural production since the 1980s, planned for development since 1999, and graded for development under prior approvals (see Section 4.2.1).

The Project site is located in an infill area surrounded by urbanized, developed land. There is no designated Prime, Unique, or Statewide Farmland onsite or in the Project vicinity. The small amount of remaining active farming in the City is located north of State Route 60 in the northeast portion of the City. This farming will not be directly or indirectly impacted by the Project due to its significant distance from the Project site.

The 2040 General Plan and Zoning identifies the area encompassing the site for Downtown Center, urban uses, as shown in Figures 2-3 and 2-4. While classified as "farmland of local importance," the site is not currently classified as "farmland" (Prime, Unique, or Statewide), is not utilized as farmland, and is not planned to be used as farmland.

As described in the City's 2006 General Plan and 2040 General Plan, the viability of farming has diminished in the City due to the high cost of water and rising cost of land. Thus, no land in the City is or has been identified for Agriculture on the City's land use maps in either the 2006 or 2040 General Plans. The conversion of agricultural land to non-agricultural use is a result of various economic, environmental, and demographic factors in the City.

Thus, while the current Project would intensify certain uses at the site compared to prior project approvals, it would not accelerate or result in the conversion of farmland because the conversion of farmland in the region is being driven by other factors: site urbanization and City urbanization has long been planned; development of the site has been approved for 25 years; and the Project is not located on or near any designated Prime, Unique, or Statewide Farmland. The conversion of farmland to urban uses is also supported by the City's 2040 General Plan policies. Impacts would be **less than significant**.

The City does not contain any forestland, timberland, or timberland production zones. **No impact** would occur related to the indirect conversion of forest land.

The Project would not involve changes to the existing environment which, due to their location or nature, could result in the conversion of farmland to a non-agricultural use or forest land to a non-forest use. Therefore, impacts would be **less than significant.**

4.2.5 Significance of Impacts Before Mitigation

Threshold 1: Important Farmland

Impacts would be less than significant.

Threshold 2: Agricultural Zoning and Williamson Act Contracts

No impact would occur.

Threshold 3: Forest Zoning

No impact would occur.

Threshold 4: Forest Land

No impact would occur.

Threshold 5: Indirect Conversion of Farmland or Forest Resources

Impacts would be less than significant.

4.2.6 Mitigation Measures

4.2.6.1 Previously Adopted Mitigation Measures

1999 EIR

No feasible mitigation was identified in the 1999 EIR.

2003 Supplemental EIR

This topic was not included in the 2003 Supplemental EIR.

2005 Addendum

No mitigation was required.

4.2.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

Impacts would be less than significant, and no mitigation is required.

4.2.7 Significance of Impacts after Mitigation

Threshold 1: Important Farmland

Impacts would be less than significant.

Threshold 2: Agricultural Zoning and Williamson Act Contracts

No impact would occur.

Threshold 3: Forest zoning

No impact would occur.

Threshold 4: Forest Land

No impact would occur.

Threshold 5: Indirect Conversion of Farmland or Forest Resources

Impacts would be less than significant.

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4.3 Air Quality

This section describes the existing air quality conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in significant and unavoidable impacts related to air quality (City of Moreno Valley 1999b, 2003, 2005b).

The following analysis of the Project's potential impacts related to air quality is based predominantly on the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report prepared by Dudek for the Project site (Appendix D of this Subsequent EIR).

4.3.1 Existing Environmental Conditions

4.3.1.1 Meteorological and Topographical Conditions

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. The air pollution problems in the South Coast Air Basin (SCAB) are a consequence of the combination of emissions from the nation's second largest urban area, meteorological conditions adverse to the dispersion of those emissions, and mountainous terrain surrounding the SCAB that traps pollutants as they are pushed inland with the sea breeze (SCAQMD 2017). Meteorological and topographical factors that affect air quality in the SCAB are described below.

Climate

The SCAB is characterized as having a Mediterranean climate (typified as semiarid with mild winters, warm summers, and moderate rainfall). The general region lies in the semi-permanent high-pressure zone of the eastern Pacific; as a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the SCAB is a function of the area's natural physical characteristics (e.g., weather and topography) and of manufactured influences (e.g., development patterns and lifestyle). Moderate temperatures, comfortable humidity, and limited precipitation characterize the climate in the SCAB. The average annual temperature varies little throughout the SCAB, averaging 75°F. However, with a less-pronounced oceanic influence, the eastern inland portions of the SCAB show greater variability in annual minimum and maximum temperatures. All portions of the SCAB have recorded temperatures over 100°F in recent years. Although the SCAB has a semiarid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry air is brought into the SCAB by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70% at the coast and 57% in the eastern part of the SCAB.

Precipitation in the SCAB is typically 9–14 inches annually and is rarely in the form of snow or hail because of typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the SCAB.

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen [NO_x]) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind of the emission sources. Southern California also has abundant sunshine, which drives the photochemical reactions that form pollutants such as ozone (O_3) and a substantial portion of particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). In the SCAB, high concentrations of O_3 are normally recorded during the late spring, summer, and early autumn months, when more intense sunlight drives enhanced photochemical reactions. Due to the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air mix and disperse into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in coastal Southern California. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air, which acts as a lid through which the cooler marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above mean sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet above mean sea level, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in the foothill communities. Below 1,200 feet above mean sea level, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during daylight hours.

Mixing heights for inversions are lower in the summer, resulting in inversions being more persistent during that season. This condition is partly responsible for the high levels of O_3 observed during summer months in the SCAB. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods, allowing them to form secondary pollutants by reacting in the presence of sunlight. The SCAB has a limited ability to disperse these pollutants due to typically low wind speeds and the surrounding mountain ranges.

As with other cities within the SCAB, the City of Moreno Valley (City) is susceptible to air inversions, which trap a layer of stagnant air near the ground where pollutants are further concentrated. These inversions produce haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

Elevated concentrations of particles less than 10 microns in diameter (PM_{10}) and $PM_{2.5}$ can occur in the SCAB throughout the year but occur most frequently in fall and winter. The deficit of normal storm systems from late fall through the winter and early spring allow for more stagnant conditions in the SCAB due to the lack of storm-related dispersion and rain-out of particulate matter and its precursors. Although there are some changes in emissions by day of the week and season, the observed variations in pollutant concentrations are primarily the result of seasonal differences in weather conditions.

4.3.1.2 Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The national and California standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[1]

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly NO_x and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at the Earth's surface in the troposphere (ground-level O_3).[2] The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013).

Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in, thereby causing shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies on the effects of O_3 on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly

1 The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2016), as well as the California Air Resources Board's "Glossary" (CARB 2022a) and "Fact Sheet: Air Pollution Sources, Effects and Control" (CARB 2009).

2 The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2022b).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016).

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher levels of exposure compared to children with lower exposure levels. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2022c).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the Project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental

effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2022d).

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of death. Older people and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2022e).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter, which is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter, which is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

Several adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature death, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2017).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory death. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2017).

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient (IQ) performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere and can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in the air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate ambient air quality standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, California Health and Safety Code Section 44300 et seq., was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

The CARB classified "particulate emissions from diesel-fueled engines" (17 CCR 93000) as a TAC in August 1998. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair) and thus is a subset of $PM_{2.5}$ (CARB 2022f). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2022f). DPM is emitted from a broad range of diesel engines: on-road diesel engines, including trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart

and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2022f). Those most vulnerable to non-cancer health effects are children, whose lungs are still developing, and older people, who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Valley Fever. Coccidioidomycosis, more commonly known as "valley fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The fungus is very prevalent in the soils of California's San Joaquin Valley, particularly in Kern County. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils.

Riverside County is not considered a highly endemic county for valley fever (i.e., highly endemic meaning more than 20 cases annually of valley fever per 100,000 people) based on the incidence rates reported through 2021. The latest report from the California Department of Public Health indicates that Riverside County had 455 cases in 2021, or 18.4 cases per 100,000 people (CDPH 2021).

4.3.1.3 Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The South Coast Air Quality Management District (SCAQMD) identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993).

The nearest sensitive receptors to the Project site are existing single-family residences, Vista Del Lago High School, and two medical centers, all located adjacent to the Project site's boundaries. These existing sensitive receptors represent the nearest land uses with the potential to be impacted by construction and operation of the Project.

The Project itself would create sensitive receptors in the form of the new residences and students. CARB identifies sources of air pollution that are of primary concern to the siting of new sensitive receptors. Those sources include freeways, high traffic roadways, distribution centers, and large stationary sources (CARB 2005). The Project site is bound by Cactus Avenue (minor arterial), Nason Street (divided arterial), Oliver Street (minor arterial), Iris Avenue (divided major arterial), and Lasselle Street (arterial) (City of Moreno Valley 2021), with existing traffic volumes

generally following or less than the City's desired maximum arterial roadway capacity of 30,000 to 55,000 vehicles per day (Appendix K3). The Project site is approximately 1.75 miles south of State Route 60. Nearby stationary sources per the SCAQMD Facility Information Detail database permit records are anticipated to include natural gas emergency generators, diesel emergency generators, a boiler, an ethylene oxide sterilizer, and a liquified petroleum gas storage tank at the County of Riverside Regional Medical Center; a natural gas generator at Eastern Municipal Water District; and a boiler at Vista Del Lago High School. The stationary sources of air pollution near the Project site are typical for these land uses. Based on the CARB Land Use Handbook, the residential portion of the Project would meet siting guidance created by the CARB to reduce exposure of air pollutants by sensitive receptors because it is not located within 500 feet of a freeway or urban roadway with more than 100,000 vehicles per day, there are no adjacent industrial sources that are anticipated to generate over 100 trucks per day, and there are no large stationary sources near the Project site.

4.3.1.4 Environmental Conditions

MATES V

The Multiple Air Toxics Exposure Study V (MATES V) is a monitoring and evaluation study conducted in the SCAB. The study is a follow up to previous air toxics studies in the SCAB and is part of the SCAQMD Governing Board Environmental Justice Initiative.

The MATES V Study consists of several elements. These include a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize risk across the SCAB. The study estimated air toxics cancer risks using a risk assessment approach. Additionally, MATES V includes an exploratory analysis of chronic non-cancer health impacts (e.g., cardiovascular, respiratory, neurological health outcomes). The MATES analysis did not estimate impacts on risk of death or other health effects from criteria air pollutant exposures; such analyses are instead conducted as part of air quality management plans (AQMPs).

Toxic air pollution in the SCAB has decreased by more than 54% between 2012 and 2018, but continues to contribute to health risks, including cancers and other chronic diseases. For residents in the SCAB in 2018, exposure to TACs increased the chances of developing cancer by 455 chances in one million (SCAQMD 2023a).

At the Project site, the MATES V monitoring data show a cancer risk of 319 to 330 chances in one million. In the Project's zip code, the MATES V monitoring shows a cancer risk of 332 chances in one million. Air toxics cancer risk in this zip code is higher than the risk for 17% of the SCAQMD population (SCAQMD 2023b).

CalEnviroScreen

CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, where people are often especially vulnerable to pollution's effects. CalEnviroScreen ranks census tracts in California based on potential exposures to pollutants, adverse environmental conditions, socioeconomic factors and the prevalence of certain health conditions. Data used in the CalEnviroScreen model come from national and state sources.

The Project site is not in a disadvantaged community pursuant to Senate Bill 535 (OEHHA 2022), nor is it in a Low-Income Community pursuant to Assembly Bill (AB) 1550 (CARB 2023a) or a Community Air Protection Program pursuant to AB 617 (CARB 2023b).

The Project site achieves scores of 38 to 48 on the CalEnviroScreen (OEHHA 2023). The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Healthy Places

The Healthy Places Index (HPI) is a project of the Public Health Alliance of Southern California. The HPI is a powerful and easy-to-use data and policy platform created to advance health equity through open and accessible data. Neighborhood-by-neighborhood, the HPI maps data on social conditions that drive health—like education, job opportunities, clean air and water, and other indicators that are positively associated with life expectancy at birth. Community leaders, policymakers, academics, and other stakeholders use the HPI to compare the health and well-being of communities, identify health inequities, and quantify the factors that shape health.

The Project site has an HPI score of 37.8 to 53.5 (California Healthy Places Index 2023). The maximum HPI score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

4.3.2 Regulatory Framework

Federal

Criteria Air Pollutants

The federal Clean Air Act, 42 USC 7401 et seq., passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. EPA is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare state implementation plans that demonstrate how those areas will attain the NAAQS within mandated time frames.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act Amendments, which expanded the control program for HAPs, 187 substances and chemical families were identified as HAPs.

State

Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, California Health and Safety Code Sections 39000–44384, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded.

California air districts have based their thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. The NAAQS and CAAQS are presented in Table 4.3-1.

Table 4.3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
O_3	1 hour	0.09 ppm (180 µg/m³)	—	Same as primary standard[f]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—

Table 4.3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as primary standard
	Annual arithmetic mean	20 µg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 µg/m³	Same as primary standard
	Annual arithmetic mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day average	1.5 µg/m³	—	—
	Calendar quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as primary standard
	Rolling 3-month average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24 hours	25 µg/m³	—	—
Visibility reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016.

Notes: O_3 = ozone; ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; mg/m³= milligrams per cubic meter; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; PST = Pacific Standard Time.

[a] California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[e] National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[f] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

g To attain the national 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

h On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the national 1-hour standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

l On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m³ to 12.0 μg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m³ were also retained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.

j CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5-μg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Local Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The SCAQMD monitors local ambient air quality in the vicinity of the Project site. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2020 to 2022 are presented in Table 4.3-2. The Perris monitoring station, located at 237 ½ North D Street, Perris, California, is the air quality monitoring station nearest to the Project site, located approximately 8.3 miles south of the Project site. The data collected at this station are considered representative of the air quality experienced in the Project vicinity. The number of days exceeding the ambient air quality standards is also shown in Table 4.3-2.

Table 4.3-2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2020	2021	2022	2020	2021	2022
Ozone (O_3)[1]									
Maximum 1-hour concentration	ppm	California	0.12	0.125	0.117	ND	34	25	ND
Maximum 8-hour concentration	ppm	California	0.070	0.106	0.094	ND	77	60	ND
		National	0.070	0.106	0.094	ND	74	55	ND
Nitrogen Dioxide (NO_2)[2]									
Maximum 1-hour concentration	ppm	California	0.18	0.066	0.052	0.055	0	0	0
		National	0.100	0.066	0.052	0.056	0	0	0
Annual concentration	ppm	California	0.030	0.014	0.014	0.013	—	—	—
		National	0.053	0.015	0.014	0.013	—	—	—

Table 4.3-2. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
				2020	2021	2022	2020	2021	2022
Carbon Monoxide (CO)[2]									
Maximum 1-hour concentration	ppm	California	20	ND	ND	ND	ND	ND	ND
		National	35	1.8	2.1	3.3	0	0	0
Maximum 8-hour concentration	ppm	California	9.0	ND	ND	ND	ND	ND	ND
		National[3]	9	1.5	1.8	1.2	0	0	0
Sulfur Dioxide (SO_2)[2]									
Maximum 1-hour concentration	ppm	National	0.075	0.002	0.0021	0.007	0	0	0
Maximum 24-hour concentration	ppm	National	0.14	0.001	0.001	0.001	0	0	0
Annual concentration	ppm	National	0.030	0.0003	0.0005	0.0005	—	—	—
Coarse Particulate Matter (PM_{10})[1,3]									
Maximum 24-hour concentration	µg/ m³	California	50	87.6	73.5	ND	ND (6)	ND (4)	ND (0)
		National	150	92.3	77.5	ND	ND (0)	ND (0)	ND (0)
Annual concentration	µg/ m³	California	20	29	24	ND	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[2,3]									
Maximum 24-hour concentration	µg/ m³	National	35	55.7	82.1	38.5	12.0 (12)	11.0 (11)	1.0 (1)
Annual concentration	µg/ m³	California	12	14.1	14	14	—	—	—
		National	12.0	13.3	12.7	10.8	—	—	—

Sources: CARB 2023c; EPA 2023a.

Notes: ppm = parts per million by volume; — = not available; µg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value.

Data taken from CARB iADAM (http://www.arb.ca.gov/adam; CARB 2023c) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.

Exceedances of national and California standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a California 24-hour standard for $PM_{2.5}$.

1 Perris Monitoring Station data, located at 237 ½ N. D St., Perris.

2 Riverside-Rubidoux Monitoring Station data, located at 5888 Mission Blvd., Rubidoux.

3 Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

South Coast Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on CAAQS rather than the NAAQS. Table 4.3-3 depicts the current attainment status of the Riverside County portion of the SCAB with respect to the NAAQS and CAAQS.

Table 4.3-3. South Coast Air Basin Attainment Classification

Pollutant	Designation/Classification	
	National Standards	California Standards
Ozone (O_3), 1-hour	No national standard	**Nonattainment**
Ozone (O_3), 8-hour	**Extreme nonattainment**	**Nonattainment**
Nitrogen Dioxide (NO_2)	Attainment/maintenance	Attainment
Carbon Monoxide (CO)	Attainment/maintenance	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/attainment	Attainment
Coarse Particulate Matter (PM_{10})	Attainment/maintenance	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	**Serious nonattainment**	**Nonattainment**
Lead	Unclassifiable/attainment	Attainment
Hydrogen Sulfide	No national standard	Unclassified
Sulfates	No national standard	Attainment
Visibility-Reducing Particles	No national standard	Unclassified
Vinyl Chloride	No national standard	Unclassified

Sources: EPA 2023b (national); CARB 2022g (California).
Notes: Bold text = not in attainment; attainment = meets the standards; attainment/maintenance = achieves the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

In summary, the SCAB is designated as a nonattainment area for national and California O_3 standards and national and California $PM_{2.5}$ standards. The SCAB is designated as a nonattainment area for California PM_{10} standards; however, it is designated as an attainment area for national PM_{10} standards. The Riverside County portion of the SCAB is designated as an attainment area for national and California CO standards, national and California NO_2 standards, national and California lead standards, and national and California SO_2 standards (EPA 2023b; CARB 2022g).

Despite the current nonattainment status, air quality in the SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly a result of lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by the SCAQMD. This trend toward cleaner air has occurred despite continued population growth. PM_{10} levels have declined almost

50% since 1990, and $PM_{2.5}$ levels have also declined 50% since measurements began in 1999 (SCAQMD 2013). Similar improvements are observed with O_3, although the rate of O_3 decline has slowed in recent years.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807, California Health and Safety Code Section 39650. The California TAC list identifies more than 200 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs.

In 1987, the legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588), California Health and Safety Code Section 44360(b)(2), to address public concern over the release of TACs into the atmosphere. AB 2588 requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings. As AB 2588 applies to facilities with permitted sources that emit TACs, such as aerospace industry manufacturers, hospitals, chemical plants, wastewater treatment plants, and oil and gas production facilities (SCAQMD 2023c), rather than residential/mixed-use development, the Project would not include facilities subject to AB 2588 or be required to perform an operational HRA.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. CARB has adopted several Airborne Toxic Control Measures (ATCMs) that reduce diesel emissions, including the following:

- Diesel Particulate Matter Control Measure for On-Road Heavy-Duty Diesel-Fueled Residential and Commercial Solid Waste Collection Vehicles (13 CCR 2020, 13 CCR 2021)
- ATCM for Diesel Particulate Matter from Portable Engines Rated 50 horsepower and greater (17 CCR 93116)
- ATCM for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities where TRUs operate (13 CCR 2477 and Article 8)
- ATCM to limit diesel-fueled commercial motor vehicle idling (13 CCR 2485)
- ATCM for In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.)
- ATCM for In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025)

California Health and Safety Code Section 41700

Section 41700 of the California Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of

any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. Section 41700 also applies to sources of objectionable odors.

Air Quality and Land Use Handbook

CARB published the Air Quality and Land Use Handbook in 2005 to provide important air quality information about certain types of facilities (e.g., freeways, refineries, distribution centers) that should be considered when siting sensitive land uses such as residences. CARB provides recommended siting distances from certain types of facilities when locating new sensitive land uses. The recommendations are advisory and should not be interpreted as defined "buffer zones." If a project is within the siting distance, CARB recommends further analysis. Where possible, CARB recommends a minimum separation between new sensitive land uses and existing sources.

Local

South Coast Air Quality Management District

While CARB is responsible for the regulation of mobile emissions sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the SCAB, where the Project is located. SCAQMD operates monitoring stations in the SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The SCAQMD's AQMPs include control measures and strategies to be implemented to attain the CAAQS and NAAQS in the SCAB. SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

Air Quality Management Plan

The most-recently adopted AQMP is the 2022 AQMP (SCAQMD 2022), which was adopted by the SCAQMD governing board on December 2, 2022. The 2022 AQMP is a regional blueprint for achieving air quality standards and healthful air. The 2022 AQMP was developed to address the requirements for meeting EPA's NAAQS for ground-level O_3. The strategies of the 2022 AQMP include wide adoption of zero-emissions technologies, low NO_x technologies where zero-emission technologies are not feasible, federal action, zero-emission technologies for residential and industrial sources, incentive funding in environmental justice areas, and prioritizing benefits on the most disadvantaged communities (SCAQMD 2022).

Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning

The SCAQMD adopted its Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning in May 2005. Like the CARB Land Use Handbook, the SCAQMD Guidance Document provides recommendations for the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, gas dispensing facilities). In its Guidance Document the SCAQMD provides recommendations for when an HRA should be prepared, such as for truck stops and warehouse distribution facilities, where more than 100 trucks per day or more than 40 trucks with truck refrigeration units are generated.

Applicable Rules

Emissions that would result from Project development may be subject to SCAQMD rules and regulations, which may include the following:

Rule 401 – Visible Emissions. This rule establishes the limit for visible emissions from stationary sources for a period or periods aggregating more than 3 minutes in any hour. This rule prohibits visible emissions dark or darker than Ringelmann No. 1 for periods greater than 3 minutes in any hour or such opacity that could obscure an observer's view to a degree equal or greater than does smoke.

Rule 402 – Nuisance. This rule prohibits the discharge of air pollutants from a facility that causes injury, detriment, nuisance, or annoyance to the public or damage to business or property.

Rule 403 – Fugitive Dust. This rule requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.

Rule 431.2 – Sulfur Content of Liquid Fuels. The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose both of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile source applications.

Rule 445 – Wood Burning Devices. The purpose of this rule is to reduce the emission of particulate matter from woodburning devices and establish contingency measures for applicable O_3 standards for the reduction of VOCs. The rule requires the installation of only gaseous-fueled fireplaces and stoves in any new residential or commercial development.

Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines. This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce NO_x, VOCs, and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule because they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.

Rule 1113 – Architectural Coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Rule 1138 – Control of Emissions from Restaurant Operations. This rule specifies PM and VOC emissions and odor control requirements for commercial cooking operations that use chain-driven char broilers to cook meat.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally

designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning organization in the United States.

In September 2020, SCAG adopted Connect SoCal, the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, planning strategies, and the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As stated above, the SCAQMD adopted the 2022 AQMP, which incorporates the updated regional growth projections from Connect SoCal (SCAG 2020; SCAQMD 2022).

The RTP/SCS is updated every 4 years. At the time of this SEIR, SCAG has released its draft 2024–2050 RTP/SCS, also referred to as "Connect SoCal 2024," and its associated draft program EIR for public review and comment. Draft Connect SoCal 2024 builds upon prior planning cycles to update the vision of the region's future. The applicant has notified SCAG of the Project and requested that the Project be included in Connect SoCal 2024's updated regional housing and population projections.

City of Moreno Valley General Plan 2040

The City adopted the City of Moreno Valley General Plan 2040 (2040 General Plan) on June 15, 2021 (City of Moreno Valley 2021).[3] The City's 2040 General Plan includes various policies related to directly and indirectly improving air quality. Applicable goals and policies include the following:

Environmental Justice

Goal EJ-1: Reduce pollution exposure and improve community health.

EJ.1-3: Require new development that would locate sensitive uses adjacent to sources of TACs to be designed to minimize any potential health risks, consistent with State law.

[3] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (Sierra Club v. City of Moreno Valley, et al., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

EJ.1-6: Ensure that construction and grading activities minimize short-term impacts to air quality by employing appropriate mitigation measures and best practices.

EJ.1-7L Require new large commercial or light industrial projects to develop and implement a plan to minimize truck idling in order to reduce diesel particulate emissions.

EJ.1-8: Support the incorporation of new technologies and design and construction techniques in new development that minimize pollution and its impacts.

EJ.1-A: Use the Climate Action Plan to guide City actions and investments aimed at reducing GHG emissions communitywide.

EJ.1-B: Work with SCAQMD, property owners, and community members to identify and implement actions that foster healthy air quality in identified SB 617 communities, leveraging State funding.

EJ.1-C: Consider establishing a fee to be paid by new development to assist in the funding of local projects that contribute to the enhancement of air quality, particularly in disadvantaged communities.

EJ.1-D: Work with the distribution and warehousing business community to improve outdoor air quality through improved operations and practices, such as planning for zero emissions trucks and vans.

EJ.1-E: Study the feasibility of measures to promote the use of electric vehicles (EVs), including the feasibility of offering incentives such as priority parking for EVs at public facilities and the feasibility of requiring a minimum number of EV ready parking spaces in new commercial, industrial, and multi-unit residential projects.

EJ.1-F: Distribute information about best practices to reduce and/or eliminate sources of indoor air pollution.

EJ.4-3: Where possible, target investments in public infrastructure, recreational facilities and programming, and air pollution control so as to benefit disadvantaged communities in Moreno Valley.

Open Space Preservation and Access

LCC.1-8: Promote a land and resource efficient development pattern in order to support efficient delivery of public services and infrastructure, conserve open space lands surrounding the city, reduce vehicle trip lengths and improve air quality.

LCC.1-12: Balance levels of employment and housing within the community to provide more opportunities for Moreno Valley residents to work locally, cut commute times, and improve air quality.

Circulation

Goal C-3: Manage the City's transportation system to minimize congestion, improve flow and improve air quality.

C.5-3: Encourage bicycling as an alternative to single occupant vehicle travel for the purpose of reducing fuel consumption, traffic congestion, and air pollution.

4.3.3 Significance Criteria

Thresholds of Significance

The significance criteria used to evaluate the Project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the Project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.
3. Expose sensitive receptors to substantial pollutant concentrations.
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the Project would have a significant impact on air quality.

The SCAQMD has established Air Quality Significance Thresholds, as revised in March 2023, that set forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality (SCAQMD 2023d). The Project's "regional" emission refers to emissions that will be evaluated based on regional significance thresholds established by the SCAQMD, also known as the criteria pollutant mass daily thresholds. The SCAQMD Air Quality Significance Thresholds also provide TACs thresholds and ambient air quality standards for criteria pollutants which are to be utilized for localized significance determination. The quantitative air quality analysis provided herein applies the SCAQMD thresholds identified in Table 4.3-4 to determine the potential for the Project to result in a significant impact under CEQA.

Table 4.3-4. SCAQMD Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds – Regional Thresholds		
Pollutant	**Construction (pounds per day)**	**Operation (pounds per day)**
VOCs	75	55
NO_x	100	55
CO	550	550
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
Lead[a]	3	3
TACs and Odor Thresholds – Localized Thresholds		
TACs[b]	Maximum incremental cancer risk ≥10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥1 in 1 million) Chronic and acute hazard index ≥1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	

Table 4.3-4. SCAQMD Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds – Regional Thresholds	
Ambient Air Quality Standards for Criteria Pollutants[c] – Localized Thresholds	
NO_2 1-hour average NO_2 annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: ▪ 0.18 ppm (state) ▪ 0.030 ppm (state) and 0.0534 ppm (federal)
CO 1-hour average CO 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: ▪ 20 ppm (state) and 35 ppm (federal) ▪ 9.0 ppm (state/federal)
PM_{10} 24-hour average PM_{10} annual average	10.4 μg/m³ (construction)[d] 2.5 μg/m³ (operation) 1.0 μg/m³
$PM_{2.5}$ 24-hour average	10.4 μg/m³ (construction)[d] 2.5 μg/m³ (operation)

Source: SCAQMD 2023d.
Notes: SCAQMD = South Coast Air Quality Management District; VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; TAC = toxic air contaminant; NO_2 = nitrogen dioxide; ppm = parts per million by volume; μg/m³ = micrograms per cubic meter.
Greenhouse gas emissions thresholds for industrial projects, as added in the March 2015 revision to the SCAQMD Air Quality Significance Thresholds, were not include included in this table as they are addressed within the greenhouse gas emissions analysis and not the air quality analysis.
[a] The phaseout of leaded gasoline started in 1976. Since gasoline no longer contains lead, the Project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.
[b] TACs include carcinogens and noncarcinogens.
[c] Ambient air quality standards for criteria pollutants are based on SCAQMD Rule 1303, Table A-2, unless otherwise stated.
[d] Ambient air quality thresholds are based on SCAQMD Rule 403.

The phasing out of leaded gasoline started in 1976. As gasoline no longer contains lead, the Project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

The evaluation of whether the Project would conflict with or obstruct implementation of the applicable air quality plan (CEQA Guidelines, Appendix G, Threshold 1) is based on the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993), Chapter 12, Sections 12.2 and 12.3. The first criterion assesses whether the Project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards of the interim emissions reductions specified in the AQMP, which is addressed in detail under Section 4.3.4, Impacts Analysis, Threshold 1. The second criterion is whether the Project would exceed the assumptions in the AQMP, or increments based on the year of Project buildout and phase, as discussed further in Threshold 2.

To evaluate the potential for the Project to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (CEQA Guidelines, Appendix G, Threshold 2), this analysis applies SCAQMD's construction and operational criteria pollutants mass daily thresholds, as shown in Table 4.3-4. A project would potentially result in a cumulatively considerable net increase in O_3, which is a nonattainment pollutant, if the project's construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 4.3-4. These emissions-based

thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur). This approach is used because O_3 is not emitted directly, and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined reliably or meaningfully through air quality models or other quantitative methods.

The assessment of the Project's potential to expose sensitive receptors to substantial pollutant concentrations (CEQA Guidelines, Appendix G, Threshold 3) includes a localized significance threshold (LST) analysis, as recommended by the SCAQMD, to evaluate the potential of localized air quality impacts to sensitive receptors in the immediate vicinity of a proposed project from construction and operation; however, an operational LST analysis is not required for the Project due to it not proposing substantial on-site sources of localized emissions.

For project sites that disturb 5 acres or less, the SCAQMD LST Methodology (SCAQMD 2009) includes lookup tables that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance criteria (i.e., the emissions would not cause an exceedance of the applicable concentration limits for NO_2, CO, PM_{10}, and $PM_{2.5}$) without performing project-specific dispersion modeling. For projects that exceed 5 acres, such as this Project, the maximum number of acres disturbed on the peak day was estimated using the Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (SCAQMD 2011), which provides estimated acres per 8-hour day for crawler tractors, graders, rubber-tired dozers, and scrapers. Based on the SCAQMD guidance, and scaling the area based on anticipated equipment usage per day, it was estimated that the maximum number of acres on the Project site that would be disturbed by off-road equipment would be 3.75 acres per day. Therefore, the LST look up values can be used to determine localized significance.

The LST significance thresholds for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant ambient air quality standards, while the threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The LST significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. The allowable emission rates depend on the following parameters:

1. Source-Receptor Area in which the project is located
2. Size of the project site
3. Distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals)

The Project site is located in Source-Receptor Area 24 (Perris Valley). LST pollutant screening level concentration data is currently published for 1-, 2-, and 5-acre sites for varying distances (25, 50, 100, 200, and 500 meters [approximately 82, 164, 328, and 1,640 feet]).

As stated above, the nearest sensitive receptor land uses are existing single-family residences, Vista Del Lago High School, and two medical centers, all located adjacent to the Project's boundaries. As the Project site is adjacent to these sensitive receptor land uses, the minimum distance recommended is 25 meters, per LST methodology (SCAQMD 2009). The residential and medical uses represent the nearest land uses to the Project site where an individual could remain for 24 hours. The nearest residential land use has been used to determine construction air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time. Because the Project is not anticipated to include substantial on-site sources of pollutants during operation (e.g., operational stationary sources), an operational LST analysis is not applicable.

The LST methodology does not include commercial and industrial facilities in the definition of sensitive receptors because employees and customers do not typically remain on site for a full 24 hours but are typically on site for 8 hours or less. The LST methodology provides that LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, may be applied to receptors such as industrial or commercial facilities since a worker at these sites could be present for periods of 1 to 8 hours (SCAQMD 2008). For this analysis, if an industrial/commercial use is located at a closer distance to the Project site than the nearest residential use, the nearest industrial/commercial use will be used to determine construction LST impacts for NO_2 and CO because that individual could be present at those sites for periods of 1 to 8 hours. However, as the nearest residential use is adjacent to the site, the minimum threshold for distance (i.e., 25 meters) is used for NO_2 and CO (SCAQMD 2009).

The LST values from the SCAQMD lookup tables for Source-Receptor Area 24 (Perris Valley) for a 3.75-acre project site and a receptor distance of 25 meters for PM_{10}, $PM_{2.5}$, NO_2, and CO are shown in Table 4.3-5.

Table 4.3-5. Construction Localized Significance Thresholds for Source Receptor Area 24 (Perris Valley)

Pollutant	Threshold (pounds per day)
NO_2	228
CO	1,288
PM_{10}	11
$PM_{2.5}$	6

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Localized significance thresholds were determined based on the values for an interpolated 3.75-acre site at a distance of 25 meters from the nearest sensitive residential receptor and 25 meters from the nearest commercial receptor.

The assessment of the Project's potential to expose sensitive receptors to substantial pollutant concentrations (CEQA Guidelines, Appendix G, Threshold 3) also includes a qualitative CO hotspot analysis based on comparison to the SCAQMD 2003 AQMP CO hotspot analysis.

The potential for the Project to result in other emissions, specifically an odor impact (CEQA Guidelines, Appendix G, Threshold 4), is based on the Project's anticipated construction activity, land use types, and the potential for the Project to create an odor nuisance pursuant to SCAQMD Rule 402.

Approach and Methodology

Project Design Features

The Project would implement project design features (PDFs) intended to reduce criteria air pollutant emissions. The Project would also implement PDFs that reduce other potential environmental impacts, such as those relating to vehicle miles traveled (VMT), and thereby achieve direct or indirect air quality co-benefits. For the full text of each PDF, please refer to Section 4.8, Greenhouse Gas Emissions. Table 4.3-6 explains whether the PDFs are incorporated in this analysis as a quantitative feature or a qualitative/supporting feature (that is, emissions reductions not estimated in this analysis).

Table 4.3-6. Project Design Features and Reduction Accounting in Air Quality Emissions Estimates

PDF Number and Name	Quantitative or Qualitative/Supporting Measure?
PDF-AQ/GHG-1: Electric Vehicle Charging Infrastructure	Qualitative/supporting
PDF-AQ/GHG-2: No Wood-Burning Fireplaces or Stoves and No Natural Gas Fireplaces	Quantitative
PDF-AQ/GHG-3: Require All-Electric Development	Quantitative
PDF-AQ/GHG-4: Provision of Rooftop Solar	Qualitative/supporting
PDF-AQ/GHG-5: LED Lighting	Qualitative/supporting
PDF-AQ/GHG-6: Energy Efficient Appliances	Qualitative/supporting
PDF-AQ/GHG-7: Energy Smart Meters	Qualitative/supporting
PDF-AQ/GHG-8: Cool Pavements	Qualitative/supporting
PDF-AQ/GHG-9: Solid Waste Reduction	Qualitative/supporting
PDF-AQ/GHG-10: Establish a Local Farmer's Market.	Qualitative/supporting
PDF-AQ/GHG-11: Tree Planting	Qualitative/supporting
PDF-AQ/GHG-12: Water Use Efficiency and Conservation Plan	Qualitative/supporting
PDF-AQ/GHG-13: Use Recycled Water for Irrigation	Qualitative/supporting
PDF-AQ/GHG-14: Use of Local Well Water for Lake	Qualitative/supporting
PDF-AQ/GHG-15: Integrated Stormwater System	Qualitative/supporting
PDF-TRANS-1: Community-Based Travel Planning	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-2: Unbundle Residential Parking Costs from Property Costs	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-3: Commute Trip Reduction (CTR) Program Marketing	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-4: Rideshare Program	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-5: End-of-Trip Bicycle Facilities	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-6: Discounted Transit Program for Work Trips	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-7: Non-Electric Bikeshare Program:	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-8: Electric Scootershare Program	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-9: Extend Transit Network Coverage	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.

Table 4.3-6. Project Design Features and Reduction Accounting in Air Quality Emissions Estimates

PDF Number and Name	Quantitative or Qualitative/Supporting Measure?
PDF-TRANS-10: Increase Transit Service Frequency	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-11: Implement Bus Rapid Transit (BRT)	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-12: Mobility Hub	Quantitative. Criteria air pollutant emission reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-13: Electric Bikeshare Program	Qualitative/supporting
PDF-TRANS-14: Provide Shuttle Service to Employment Centers	Qualitative/supporting
PDF-TRANS-15: Implement Market Price Public Parking	Qualitative/supporting
PDF-LU-1: Mixed-Use Project Design	Qualitative/supporting
PDF-LU-2: Provision of Urban Core	Qualitative/supporting
PDF-LU-3: Short Walkable Blocks	Qualitative/supporting
PDF-LU-4: Increased Residential Density	Qualitative/supporting
PDF-LU-5: Walkable/Bikeable Community	Qualitative/supporting
PDF-LU-6: Transit Benefits	Qualitative/supporting
PDF-LU-7: Integrated Design	Qualitative/supporting
PDF-LU-8: Other Integrated Project Features	Qualitative/supporting
PDF-LU-9: Complete Streets	Qualitative/supporting
PDF-LU-10: Traffic Calming	Qualitative/supporting
PDF-LU-11: Roundabouts	Qualitative/supporting

All PDFs would be required as City-imposed Conditions of Approval to ensure they are implemented during construction and operation of the Project.

Construction Emissions

The California Emissions Estimator Model (CalEEMod) 2022 Version 2022.1.1.20 was used to estimate emissions from construction and operation of the Project (CAPCOA 2022). CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant and GHG emissions associated with construction activities and operation of a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the land use type used to represent the Project and its size, construction schedule, and anticipated use of construction equipment, were based on information provided by the applicant or default model assumptions if Project specifics were unavailable.

For purposes of estimating Project emissions, it is assumed that construction of Project would commence in January 2025. For emissions modeling purposes, construction was broken down into six model runs by phase as follows:

- Phase 1, 2025–2026
- Phase 2, 2027–2028
- Phase 3, 2029–2030
- Phase 4, 2031–2032
- Phase 5, 2033–2034
- Phase 6, 2035–2036

Each phase includes development of 2,500 residential units (1,250 low-rise residential units and 1,250 mid-rise residential units) along with surface parking spaces, parking structures, and paved surfaces for circulation. All other land uses, including retail, educational, and recreational land uses, were allocated to the six phases based on best available information. Each of the six phases follow a similar construction schedule that includes site preparation, grading and utilities; paving for circulation; pavement striping (architectural coating) for circulation; building construction for residential and building construction for the applicable non-residential development like schools and parks; architectural coating for residential and for the applicable non-residential development; paving for parking; and pavement striping (architectural coating) for parking. Each phase begins in January of one year and ends in December two years later.

For each phase, the land use breakdown assumed in CalEEMod is presented in a table in Appendix D. Construction scenario assumptions, including phase start and end date, vehicle trips (worker, haul truck, vendor truck, and on-site trucks) and equipment (type, quantity, and usage hours per day) are presented in a separate table in Appendix D. Appendix D present the construction scenario assumptions used for estimating Project-generated emissions in CalEEMod for the Project.

No demolition is required for the Project as there are no structures on the Project site. As the Project site has been previously graded, no import or export of material is anticipated to be required. Vendor trucks listed in earth-moving phases (i.e., site preparation, grading, utilities) represent water trucks.

The Project will be required to comply with SCAQMD Rule 403 to control dust emissions during any dust-generating activities. SCAQMD Rule 403 requires implementation of various best available fugitive dust control measures for different sources for all construction activity sources within its jurisdictional boundaries. Dust control measures include, but are not limited to, maintaining stability of soil through pre-watering of site prior to clearing, grubbing, cut and fill, and earth-moving activities; stabilizing soil during and immediately after clearing, grubbing, cut and fill, and other earth-moving activities; stabilizing backfill during handling and at completion of activity; and pre-watering material prior to truck loading and ensuring that freeboard exceeds 6 inches. While SCAQMD Rule 403 requires fugitive dust control beyond watering control measures, compliance with Rule 403 is represented in CalEEMod by assuming twice daily watering of active sites (61% reduction in PM_{10} and $PM_{2.5}$ [CAPCOA 2022]).

The Project will also be required to comply with SCAQMD's Rule 1113 (Architectural Coatings), which requires that the construction contractor shall procure architectural coatings that comply with the SCAQMD grams per liter VOC limits as identified by application type (paint and other finishes) to reduce associated VOC emissions.

Three separate CalEEMod runs were performed for each of the six construction phases to address the various potential impacts evaluated herein:

1. Base CalEEMod run for mass (regional) emissions that includes all on-site and off-site sources.
2. Adjusted CalEEMod run for the LST analysis that includes all on-site sources and only a small portion of all off-site vehicles. Because the LST analysis is focused on localized emissions of criteria air pollutants, 0.25 miles for off-site vehicle travel for worker vehicles, vendor trucks, and haul trucks trips were assumed. This is conservative as the SCAQMD LST methodology indicates that "off-site mobile emissions from the project should not be included in the emissions compared to the LSTs" (SCAQMD 2009).
3. Adjusted CalEEMod run for the HRA analysis that includes all on-site sources and only a small portion of diesel-fueled off-site vehicles. Because the HRA analysis is focused on localized emissions of TACs, specifically DPM, 0.25 miles for off-site vehicle travel for vendor trucks and haul trucks trips were assumed, as heavy-heavy duty trucks (typical of haul trucks) are generally diesel-fueled and medium duty trucks (typical of vendor trucks) are generally diesel- or gasoline-fueled, whereas worker trucks are generally gasoline-fueled.

Construction Health Risk Assessment

A construction HRA was performed to evaluate potential health risk associated with construction of the Project. The following discussion summarizes the dispersion modeling and HRA methodology; supporting construction HRA documentation, including detailed assumptions, is presented in Appendix E of Appendix D.

For risk assessment purposes, PM_{10} in diesel exhaust is considered DPM, originating mainly from off-road equipment operating at a defined location for a given length of time at a given distance from sensitive receptors. Less-intensive, more-dispersed emissions result from on-road vehicle exhaust (e.g., heavy-duty diesel trucks). For the construction HRA, the CalEEMod scenario for the Project was adjusted to reduce diesel truck one-way trip distances to 0.25 miles to estimate emissions from truck pass-by at proximate receptors (SJVAPCD 2018).

The air dispersion modeling methodology was based on generally accepted modeling practices of SCAQMD (SCAQMD 2023e). Air dispersion modeling was performed using the EPA's American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Version 21112 modeling system (computer software) with the Lakes Environmental Software implementation/user interface, AERMOD View Version 11.2.0. The HRA followed the Office of Environmental Health Hazard Assessment 2015 guidelines (OEHHA 2015) and SCAQMD guidance to calculate the health risk impacts at all proximate receptors (on site and off site) as further discussed below. The dispersion modeling included the use of standard regulatory default options. AERMOD parameters were selected consistent with the SCAQMD and EPA guidance and identified as representative of the Project site and Project activities. Principal parameters of this modeling are presented in Appendix D.

AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the necessary input values for CARB's Hotspots Analysis and Reporting Program Version 2 (HARP2). The line of volume sources was partitioned evenly based on the 1 gram per second emission rate. The ground-level concentration plot files were then used to estimate the long-term cancer health risk to an individual, and the noncancerous chronic health indices. There is no reference exposure level for acute health impacts from DPM, and thus, acute risk was not evaluated.

Cancer risk is defined as the increase in probability (chance) of an individual developing cancer due to exposure to a carcinogenic compound, typically expressed as the increased chances in one million. Maximum Individual Cancer Risk is the estimated probability of a maximally exposed individual potentially contracting cancer as a result of

exposure to TACs over a period of 30 years for residential receptor locations. For the construction HRA, the TAC exposure period was assumed to be from third trimester of pregnancy to 12 years for all off-site receptor locations (i.e., 12 years is the assumed duration of Project construction). For on-site exposure, the duration was assumed to be 10 years, which is the longest exposure duration for an on-site receptor while Project construction is active, as Phase 1 is assumed to be operational 2 years after construction is commenced. Additionally, the 2022 Title 24 Standards require Minimum Efficiency Reporting Value (MERV) 13 air filters in new construction which help to capture outdoor air particles. MERV 13 filters have been demonstrated to remove approximately 90% of particulate matter from intake air (Singer et al. 2016). As such, on-site residential health risk assumes use of MERV 13 filters. The exposure pathway for DPM is inhalation only.

The SCAQMD has also established noncarcinogenic risk parameters for use in HRAs since some TACs increase noncancerous health risk due to long-term (chronic) exposures and some TACs increase noncancerous health risk due to short-term (acute) exposures. Chronic exposure is evaluated in the construction HRA. Noncarcinogenic risks are quantified by calculating a hazard index, expressed as the ratio between the ambient pollutant concentration and its toxicity or relative exposure level, which is a concentration at or below which health effects are not likely to occur. The chronic hazard index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. A hazard index less of than one (1.0) means that adverse health effects are not expected.

Operational Emissions

Project-generated operational criteria air pollutant emissions were estimated for mobile, area, and energy sources using CalEEMod and based on Project-specific values and CalEEMod default values by land use type and quantity when Project-specifics were not available. The Project's full year of buildout is estimated to be 2037. Table 4.3-7 provides a summary of the land use inputs included in the CalEEMod modeling.

Table 4.3-7. CalEEMod Land Use Development Summary for the Project under Buildout

Project Component	CalEEMod Land Use Type	Land Use Amount (Size)	Land Use Size Metric	Building Square Footage	Land Use Acreage
Residential	Apartments Mid Rise	7,500	DU	7,425,000	114.76
Residential	Apartments Low Rise	7,500	DU	7,425,000	223.30
Retail	Regional Shopping Center	34.93	KSF	34,930	12.98
Recreational	High Turnover (Sit Down Restaurant)	14.97	KSF	14,970	6
Recreational	Hotel	300	Room	300,000	2.25
Recreational	City Park (Active)	25	Acre	0	25
Recreational	City Park (Lake Promenade)	15	Acre	0	15
Recreational	User Defined (Lake)	40	Acre	0	40
Recreational	Recreational Swimming Pool (Pools and Spas)	40.8	KSF	0	0
Educational	Elementary School	3,995	Student	192,000	30

Table 4.3-7. CalEEMod Land Use Development Summary for the Project under Buildout

Project Component	CalEEMod Land Use Type	Land Use Amount (Size)	Land Use Size Metric	Building Square Footage	Land Use Acreage
Educational	Middle School	2,049	Student	85,000	10
Parking	Other Asphalt Surface	30	Acre	0	30
Parking	Enclosed Parking Structure (Mid Rise Parking)	11,847	Space	4,738,800	27.71
Parking	Parking Lot (Low Rise Parking)	11,925	Space	0	109.50

Source: Appendix D.
Notes: DU = dwelling unit; KSF = 1,000 square feet.

In addition to full buildout of the Project, five interim operational years were modeled to estimate Project-generated emissions as the Project is developed and implemented. The interim scenarios include the following, with land use assumption details provided in Appendix D:

- Phase 1 (2027)
- Phases 1 and 2 (2029)
- Phases 1 through 3 (2031)
- Phases 1 through 4 (2033)
- Phases 1 through 5 (2035)

The calculation of mobile, area, and energy criteria air pollutant emissions is explained below.

Mobile Sources

Mobile sources for the Project would be residents, visitors, customers, and employees traveling to and from the Project site. CalEEMod was used to estimate mobile source emissions for the Project under buildout of the Project in 2037, as well as additional interim operational scenarios; however, Project-specific input values were used where available, as explained below.

CalEEMod includes multiple variables for estimating project-generated traffic and associated VMT. Project-generated weekday, Saturday, and Sunday trips, as well as Project-generated VMT per weekday, Saturday, and Sunday, were calculated outside of CalEEMod based on the Trip Generation Assessment and Transportation Impact Assessment prepared for the Project by Fehr & Peers (Appendices K1 and K2), as well as VMT estimates for emission modeling purposes as provided by Fehr & Peers, and inputted into CalEEMod. Trips per weekday and VMT per weekday were specifically estimated for the Project at buildout. To estimate Saturday and Sunday trips, the proportion of CalEEMod default Saturday and Sunday trip rates to weekday trip rates were applied by each land use to account for the variability in weekend trips (e.g., Saturday trips increase compared to weekday for retail; however, elementary and middle school trips reduce). To estimate weekend VMT, the estimated Saturday and Sunday trips were multiplied by the average trip length. All average trip lengths for the Project assume full buildout of the World Logistics Center in 2045, which roughly equates to 22,000 employees, as interpolated appropriately for each

interim operational year based on World Logistics Center anticipated buildout. The World Logistics Center buildout employee projections reflect the number of employees who may or may not reside in the Project. Annual trips and VMT were then calculated using CalEEMod based on the daily estimates.[4] Because an average trip length was applied in the analysis that included an aggregate of shorter and longer trips, no diverted or pass-by trips were assumed.

CalEEMod default emission factors representing the vehicle mix and emissions for 2037 were used for buildout of the Project; for each interim scenario, the appropriate year was selected. As represented in CalEEMod, motor vehicles may be fueled with gasoline, diesel, or alternative fuels such as electricity.

The Project includes multiple improvements and site-related features that would result in a reduction in trips and VMT and associated emissions as outlined in PDF-TRANS-1 through PDF-TRANS-12. Because VMT was estimated with and without PDFs, no traffic-related reductions were taken in the CalEEMod mitigation module, but instead they were incorporated into the VMT assumptions.

The Project also includes installation of EV chargers per PDF-AQ/GHG-1; however, the reduction in emissions was only quantified in the GHG emissions analysis.

- Project without PDF:
  - ***Trip rates and VMT.*** Trips and VMT were estimated based on data provided by Fehr & Peers for the Project assuming that PDFs were not incorporated and not taking credit for anticipated internalization of trips associated with the mixed-use nature of the Project. Key inputs are provided below for each operational run:
    - ***Phase 1 (2027):*** 17,727 trips per weekday, 9.82 miles average trip length, 174,080 VMT per weekday
    - ***Phases 1 and 2 (2029):*** 34,474 trips per weekday, 9.66 miles average trip length, 333,019 VMT per weekday
    - ***Phases 1 through 3 (2031):*** 56,153 trips per weekday, 9.49 miles average trip length, 532,888 VMT per weekday
    - ***Phases 1 through 4 (2033):*** 73,524 trips per weekday, 9.33 miles average trip length, 685,978 VMT per weekday
    - ***Phases 1 through 5 (2035):*** 87,876 trips per weekday, 9.16 miles average trip length, 804,943 VMT per weekday
    - ***Full Buildout (2037):*** 105,000 trips per weekday, 9.00 miles average trip length, 944,995 VMT per weekday
  - ***Fleet Mix.*** Default CalEEMod values were applied.
  - ***Vehicle Emission Factors.*** Default CalEEMod values were applied.
  - ***Road Dust.*** Default CalEEMod values were applied.
- Project with PDF:
  - ***Trip rates and VMT.*** Trips and VMT were estimated based on data provided by Fehr & Peers for the Project assuming that PDF-TRANS-1 through PDF-TRANS-12 are incorporated. Anticipated

[4] CalEEMod only allows the user to input trip rates, trip lengths, and land use metrics to two decimal places. Therefore, there is the potential for rounding to result in slightly different results. However, the margin of error associated with rounding to two decimal places (less than 0.1%) would not substantially change the estimated emissions or the significance conclusions.

internalization of trips associated with the mixed-use nature of the Project was not included. Key inputs are provided below for each operational run:

  - ***Phase 1 (2027):*** 11,718 trips per weekday, 9.82 miles average trip length, 115,073 VMT per weekday
  - ***Phases 1 and 2 (2029):*** 28,454 trips per weekday, 9.66 miles average trip length, 274,865 VMT per weekday
  - ***Phases 1 through 3 (2031):*** 50,135 trips per weekday, 9.49 miles average trip length, 475,778 VMT per weekday
  - ***Phases 1 through 4 (2033):*** 67,516 trips per weekday, 9.33 miles average trip length, 629,927 VMT per weekday
  - ***Phases 1 through 5 (2035):*** 81,878 trips per weekday, 9.16 miles average trip length, 750,007 VMT per weekday
  - ***Full Buildout (2037):*** 98,989 trips per weekday, 9.00 miles average trip length, 890,901 VMT per weekday
- ***Fleet Mix.*** Default CalEEMod values were applied.
- ***Vehicle Emission Factors.*** Default CalEEMod values were applied.
- ***Road Dust.*** Default CalEEMod values were applied.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating, water heating, and stoves are calculated in the building energy use module of CalEEMod, as described in the following text.

CalEEMod estimates direct emissions from hearths (fireplaces) and woodstoves and includes default values for residential land uses and estimates natural gas fireplace emissions based on emission factors from AP-42, Compilation of Air Pollutant Emissions Factors from Stationary Sources (EPA 2024). In accordance with SCAQMD Rule 445 (Wood Burning Devices), the Project is not permitted to provide wood burning devices, but could include natural gas, propane, or electric fireplaces.

Consumer products are chemically formulated products used by household and institutional consumers, including cleaning supplies, kitchen aerosols, cosmetics, toiletries, and pesticides/fertilizers used at City parks (CAPCOA 2022). Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2022). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of residential and nonresidential buildings and on the default factor of pounds of VOC per building square foot per day. For the recreational land uses represented as “City park,” CalEEMod estimates VOC emissions associated with use of pesticides and fertilizers based on a square footage and pounds of VOC per square foot per day. For the asphalt surface land use, CalEEMod estimates VOC emissions associated with use of parking surface degreasers based on a square footage of parking surface area and pounds of VOC per square foot per day.

VOC off-gassing emissions result from the evaporation of solvents contained in surface coatings, such as in paints and primers, used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of nonresidential surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emission factor is based on the VOC content

of the surface coatings, and SCAQMD's Rule 1113 (Architectural Coatings) governs the VOC content for interior and exterior coatings. The model default reapplication rate of 10% of area per year is used. Consistent with CalEEMod defaults, it is assumed that the residential surface area for painting equals 2.7 times the floor square footage and the nonresidential surface area for painting equals 2.0 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating. For the other asphalt surfaces assumed, the architectural coating area is assumed to be 6% of the total square footage, consistent with the supporting CalEEMod studies provided as an appendix to the CalEEMod User's Guide (CAPCOA 2022).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, shredders/grinders, and leaf blowers, which are assumed to be gasoline-fueled. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days.

- Project without PDF:
  - ***Hearths.*** Default CalEEMod values included wood-burning fireplaces and natural gas fireplaces. All wood burning fireplaces were assumed to be natural gas fireplaces instead. The default assumption of the amount of units without fireplaces remained the same. Default CalEEMod values that assumed wood-burning stoves were adjusted to assume zero wood burning stoves.
  - ***Consumer Products.*** Default CalEEMod values were applied.
  - ***Architectural Coating.*** Default CalEEMod values were applied.
  - ***Landscape Equipment.*** Default CalEEMod values were applied.
- Project with PDF:
  - ***Hearths.*** PDF-AQ/GHG-2 was assumed. All fireplaces were assumed to be electric. Default CalEEMod values that assumed wood-burning stoves were adjusted to assume zero wood burning stoves.
  - ***Consumer Products.*** Default CalEEMod values were applied.
  - ***Architectural Coating.*** Default CalEEMod values were applied.
  - ***Landscape Equipment.*** Default CalEEMod values were applied.

Energy Source

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHG emissions in CalEEMod, since criteria pollutant emissions would occur at the site of power plants, which are not on the Project site. However, natural gas combustion would occur at the Project site itself, in association with equipment that uses natural gas.

For the without PDF analysis, GHG emissions associated with the natural gas and electricity usage associated with the Project were calculated by CalEEMod using default parameters. For the with PDF analysis, energy use was specifically estimated for the Project as provided in the Annual Energy Use Calculations prepared for the Project by VCA Green (Appendix D) with the exception of parking lot and parking structure land uses, which used default CalEEMod values. The energy report also estimated photovoltaics (PV) by land use. For interim operational years, the energy use rates and PV generation rates, along with Project buildout metrics, were used to estimate the energy use for that year.

- **Project without PDF:**
  - ***Energy.*** Default CalEEMod values were applied, which includes natural gas and electricity use. The following was assumed for full buildout of the Project in 2037:
    - ***Total annual electricity use:*** *124,196,354 kilowatt-hours*
    - ***Total annual natural gas:*** *246,088,681 thousand British thermal units*
    - ***Total annual PV generation:*** *0 kilowatt-hours*

- **Project with PDF:**
  - ***Energy.*** Project-specific energy values were inputted with the exception of parking lot and parking structure land uses, which were based on default CalEEMod values. PDF-AQ/GHG-3 was assumed wherein all residential and non-residential land uses were assumed to be 100% electric with the exception of the restaurant land use (represented in CalEEMod as "High Turnover [Sit Down Restaurant]"), which included Project-specific electricity and natural gas use. PDF-AQ/GHG-4 also was assumed, which includes provision of rooftop solar. PDF-AQ/GHG-6, requiring energy efficient appliances, was also assumed in the CalEEMod mitigation module for residential and non-residential land uses. The following was assumed for full buildout of the Project in 2037:
    - ***Total annual electricity use:*** *121,850,438 kilowatt-hours*
    - ***Total annual natural gas:*** *1,499,695 thousand British thermal units*
  - ***Total annual PV generation:*** *48,122,901 kilowatt-hours (not including solar water heating)*

4.3.4 Impact Analysis

4.3.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

Construction-Related Impacts

The 1999 EIR concluded that construction-related criteria air pollutant emissions would not be significant unless the rate of construction exceeded expectations or cumulative construction emissions from other projects in the area resulted in an exceedance of SCAQMD thresholds. Emissions from construction were not quantified in the 1999 EIR analysis given that grading and site plans were not available. The analysis indicated that based on the large size of the Specific Plan Area, it was possible that construction-related emissions could exceed the SCAQMD thresholds. However, with a build-out period taking 10–15 years and averaging up to 292 new homes constructed per year, the rate would be below the SCAQMD's quarterly screening level threshold (potential significance threshold) for single-family residential construction (Table 6-3 in SCAQMD 1993). The proposed non-residential uses were also found to be below the screening threshold rate. Therefore, the analysis found that unless the rate of construction exceeded expectations or cumulative construction emissions from other projects in the area resulted in an exceedance of thresholds, the construction-related air quality impacts would not be significant (City of Moreno Valley 1999b).

Operation-Related Impacts

The 1999 EIR concluded that operation-related criteria air pollutant emissions would be less than significant after mitigation. Emissions from operation of the original SP 218 were estimated for stationary sources, mobile sources, and energy consumption and compared to the operation-related SCAQMD significance thresholds. Prior to mitigation, it was estimated that build-out of the original SP 218 would exceed the SCAQMD's significance threshold for CO, reactive organic compounds, and NO_x, which was considered a significant impact requiring mitigation.

The 1999 EIR air quality analysis found that there would be no significant impact related to localized CO hotspots. The traffic analysis prepared for the original SP 218 concluded that levels of service at intersections surrounding the Specific Plan Area would operate at level of service D or better at build-out, provided that project-specific roadway improvements were completed. Additionally, 1-hour ambient CO concentrations in the Specific Plan Area were projected to be below the state's 1-hour standard. Therefore, it was concluded that project-generated traffic would not create localized CO impacts.

The 1999 EIR concluded that potential sources of TACs proposed with the original SP 218 would not result in significant impacts to sensitive receptors. Sources of TACs related to the original SP 218 included the proposed service station and the Riverside County Hospital, which was under construction adjacent to the Specific Plan Area. The analysis found that both the service station and Riverside County Hospital would be new uses that would need to obtain appropriate permits from the SCAQMD to construction and operate, and therefore were not expected to create significant impacts to proposed sensitive receptors within the Specific Plan Area.

Consistency with Regional Plan

The 1999 EIR concluded that the original SP 218 would result in a significant impact related to consistency with regional plans even with implementation of mitigation. The air quality analysis found that the original SP 218 was not consistent with the SCAQMD regional AQMP, which was prepared with growth assumptions from the SCAG Growth Management Plan. The development resulting from implementation of the original SP 218 would create a denser land use pattern than that assumed in the Growth Management Plan and subsequently the AQMP. If approved, the original SP 218 would be included in future updates to the Growth Management Plan and AQMP. However, given that the growth assumed with the original SP 218 would exceed that assumed in the AQMP, the original SP 218 would not be consistent with the AQMP and would result in a significant impact even after implementation of mitigation.

Mitigation

The 1999 EIR included mitigation measures to reduce impacts related to air quality, including to reduce the original SP 218's criteria air pollutant emissions; however, detailed grading plans, site designs, and building designs were not developed at the time and many mitigation measures on project-related emissions were not quantified.

Construction-related emissions were unlikely to exceed thresholds; however, measures from the CEQA Air Quality Handbook (Table 11-4 in SCAQMD 1993), such as applying soil stabilizers, replacing ground cover in disturbed areas, watering active sites, and enforcing traffic speeds on unpaved roads, were recommended.

To mitigate mobile source emissions, the 1999 EIR planned to incorporate emission reduction measures such as on-site transit stops, mixed retail services within residential areas, and energy conservation measures for buildings. These mitigation measures reduced the emissions impact to less than significant.

Strategies to minimize the degree of inconsistency with the AQMP included various transportation control measures to reduce smog and traffic congestion by cutting motor vehicle trips and miles traveled. Regional strategies to reduce single occupant ridership and VMT were beyond the scope of the original SP 218 to implement; therefore, impacts remained significant (City of Moreno Valley 1999b).

2003 Supplemental EIR

Analysis

The writ of mandate did not require further evaluation of air quality impacts in the 2003 Supplemental EIR. The air quality analysis was therefore incorporated by reference and was determined to be consistent with the 1999 EIR.

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum indicated that the proposed age-restricted active adult development would generate approximately 55% less traffic than the original SP 218 concept; therefore, long-term criteria air pollutant emissions would be similarly reduced. However, even with a reduction in emissions, the impact would remain significant even with the implementation of all feasible mitigation measures as outlined in the original 1999 EIR.

Mitigation

No additional mitigation was identified.

4.3.4.2 Project Impact Analysis

Threshold 1. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

As previously discussed, the Project is located within the SCAB under the jurisdiction of the SCAQMD, which is the local agency responsible for administration and enforcement of air quality regulations for the area. The SCAQMD has established criteria for determining consistency with the AQMP, currently the 2022 AQMP, in Chapter 12, Sections 12.2 and 12.3, in the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993). The criteria are as follows (SCAQMD 1993):

- **Consistency Criterion No. 1:** The project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards of the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2:** The project will not exceed the assumptions in the AQMP, or increments based on the year of project buildout and phase.

Consistency Criterion No. 1

Threshold 2 below applies the SCAQMD mass daily construction and operational thresholds to evaluate the Project's potential impacts with regards to cumulatively considerable net increase of a nonattainment criteria pollutant, as well as the potential for the Project to result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations (Consistency Criterion No. 1).

As discussed below, emissions resulting from the Project construction would exceed the criteria pollutant thresholds established by the SCAQMD for VOC and NO_x emissions. This impact would be **potentially significant** without mitigation. Implementation of **Mitigation Measure (MM) AQ-2** through **MM-AQ-7** would be required.

Project operational-source air pollutant emissions would result in exceedances of regional thresholds for emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$, even after implementation of PDFs, as demonstrated in Table 4.3-12. These threshold exceedances would increase when the overlap of phased construction and operations of the Project is considered, as discussed under Threshold 2 below. As such, the Project's criteria air pollutant emissions are considered potentially significant, and the Project would have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality standards. Thus, the Project would potentially conflict with Consistency Criterion No. 1 of the SCAQMD CEQA Air Quality Handbook resulting in a **potentially significant impact**. The health effects of criteria air pollutants are discussed in depth under Threshold 2.

Consistency Criterion No. 2

The 2022 AQMP accommodates planned growth in the SCAB. Projects are considered consistent with, and would not conflict with or obstruct implementation of, the 2022 AQMP if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP (per Consistency Criterion No. 2 of SCAQMD 1993).

The SCAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the SCAG for its RTP/SCS (SCAG 2020), which is based on general plans for cities and counties in the SCAB, for the development of the AQMP emissions inventory (SCAQMD 2022).[5] The SCAG 2020–2045 RTP/SCS (Connect SoCal) and associated Regional Growth Forecast are generally consistent with the local plans; therefore, the 2022 AQMP is generally consistent with local government plans.

Table 4.3-8 shows the growth projections for Moreno Valley from SCAG's 2020–2045 RTP/SCS, broken down by population and employment. Although updated projections are contained within the City's 2040 General Plan, since 2022 AQMP is based on the 2020–2045 RTP/SCS projections, the Project's resultant population and employment growth is compared to the values depicted in Table 4.3-8 to determine consistency with the AQMP.

[5] Information necessary to produce the emission inventory for the SCAB is obtained from the SCAQMD and other governmental agencies, including CARB, the California Department of Transportation, and SCAG. Each of these agencies is responsible for collecting data (e.g., industry growth factors, socioeconomic projections, travel activity levels, emission factors, emission speciation profile, and emissions) and developing methodologies (e.g., model and demographic forecast improvements) required to generate a comprehensive emissions inventory. SCAG incorporates these data into their Travel Demand Model for estimating/projecting vehicle miles traveled and driving speeds. SCAG's socioeconomic and transportation activities projections in its 2020–2045 RTP/SCS are integrated in the 2022 AQMP (SCAQMD 2022).

Table 4.3-8. SCAG Growth Projections for the City of Moreno Valley

	Existing (2016)	SCAG Projected (2045)	Increment
Population	205,700	266,800	61,100 (29.7%)
Employment	35,500	64,900	29,400 (82.8%)

Source: SCAG 2020.

The Project would result in the construction of an additional 12,078 multifamily and workforce housing dwelling units for all ages and income levels compared to the existing approved plan of 2,922 dwelling units, for a total 15,000 units.[6] The 12,078 additional units would have the potential to house approximately 34,664 more people compared to the prior approvals, based on an average household size of 2.87 persons per dwelling unit. A total of 43,050 people would be housed at the Project site after full buildout. The 43,050 people estimated to be housed within the Project would fall within SCAG's forecast of an additional 64,900 new City residents by 2045 (SCAG 2020). Thus, the Project would accommodate population growth anticipated to occur in the City through 2045. Historically, housing supply in the region has not kept up with population growth (SCAG 2020). Compared to the City's 2040 General Plan, buildout of the Project would create a denser land use pattern by focusing housing to the Project site in the City's Downtown Center, rather than more broadly disseminated throughout the City.

Indirect population growth can result from employment opportunities or from the expansion or extension of infrastructure that would support population growth. The Project would result in the creation of approximately 55,788 one-time construction jobs and 2,500 permanent jobs. The Project's employment opportunities are not anticipated to induce substantial population growth given the size of the labor pool existing in the City and nearby communities. Rather, the Project is anticipated to house and accommodate area workers and students. The employment patterns of construction workers in Southern California are such that it is unlikely that they would relocate their households as a consequence of the construction employment associated with the Project. Construction workers regularly commute to job sites, and many workers are highly specialized such that their specific skills are needed to complete only a particular phase of the construction process. Further, it is likely that the skilled workers needed to complete the Project already reside within the region.[7]

Permanent jobs would mostly be associated with the Town Center and schools. The Project is not anticipated to cause significant numbers of people to relocate for employment purposes. Therefore, Project construction and operation is not anticipated to induce substantial unplanned population growth related to employment, which would be within the SCAG forecast of 29,400 new jobs within the City by 2045 (SCAG 2020). Located in an infill area, infrastructure to support the Project would be appropriately sized and would not induce population growth or alter land use patterns in the City.

While the preceding considerations and numerical assessment support that the Project's residential and employment growth are within the SCAG's 2020-2045 RTP/SCS growth projections for Moreno Valley, the Project includes a General Plan Amendment to increase the residential land use density within a focused area, resulting in additional residential units than allowed for under current 2040 General Plan land use and zoning designations at the Project site. Therefore, the Project's increase in housing density at the site may conflict with the regional growth

6 The Project would also incorporate a 10-acre parcel previously designated R-5, which allows single family housing up to 5 dwelling units/acre, that was considered in the City's 2040 General Plan and SCAG's forecasting.

7 Current employment opportunities in the City and the region come from the healthcare, local higher education, management, business, science, and arts occupations. The largest employers within the City presently include March Air Reserve Base, Amazon, Riverside University Health System Medical Center, Moreno Valley Unified School District, and Ross Dress for Less/dd's Discounts (City of Moreno Valley 2021).

projections assumed in the 2022 AQMP by creating a denser land use pattern in this area. The Project's employment is unlikely to conflict with regional growth projections because the site was previously approved for 25 acres of commercial (300,000 square feet of commercial/retail), and the Project provides less commercial/retail. However, the Project also includes four schools, which were previously not assumed, so the overall employment pattern could similarly present a conflict with the 2022 AQMP growth assumptions by focusing alternative employment opportunities in this area.

As such, the Project's population and employment projections generally fall within SCAG's projections in the 2022 AQMP for the City. However, the Project would focus additional housing and employment to the Project site in the City's Downtown Center, creating a denser land use pattern than assumed in SCAG's projections and, consequently, the 2022 AQMP. Thus, the Project would potentially conflict with Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook. Implementation of **MM-AQ-1** would ensure that the appropriate growth and land use projections at the Project site would be incorporated into the next SCAG RTP/SCS and the following SCAQMD AQMP, which would resolve this inconsistency in the future.

Summary

The Project would potentially conflict with Consistency Criterion No. 1 and Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook and impacts would be **potentially significant**.

Threshold 2: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the applicable significance thresholds, it would have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003a).

In considering cumulative impacts from the Project, the analysis must specifically evaluate the Project's contribution to the cumulative increase in pollutants for which the SCAB is designated as nonattainment for the CAAQS and NAAQS. As discussed previously, the SCAB has been designated as a national nonattainment area for O_3 and $PM_{2.5}$ and a California nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. Construction and operation of the Project would result in emissions of criteria air pollutants, which may result in a cumulatively considerable increase in emissions of criteria air pollutants for which the SCAB is designated as nonattainment under the NAAQS or CAAQS. The following discussion quantitatively evaluates potential short-term construction and long-term operational impacts that would result from implementation of the Project.

Construction Emissions

Proposed construction activities would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing from architectural coatings and asphalt pavement application) and off-site sources (i.e., on-road haul trucks, delivery trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the

specific type of operation, and, for dust, the prevailing weather conditions. Therefore, such emissions levels can only be estimated, with a corresponding uncertainty in precise ambient air quality impacts.

As discussed in Section 4.3.4 under Approach and Methodology, Construction Emissions, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod based on the construction information presented in detailed tables in Appendix D. Construction schedule assumptions, including phase type, duration, and sequencing, were based on information provided by the Project applicant and are intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed Project information was not available.

Implementation of the Project would generate criteria air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. The Project will be required to comply with SCAQMD Rule 403 to control dust emissions generated during the grading activities. Standard construction practices that were assumed to be employed to reduce fugitive dust emissions, and were quantified in CalEEMod, include watering of the active sites two times per day depending on weather conditions. Internal combustion engines used by construction equipment, haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement would also produce VOC emissions; however, the contractor will be required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD's Rule 1113 (Architectural Coatings).

Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during each year of construction (2025 through 2036). Table 4.3-9 presents the estimated maximum daily construction emissions generated during construction of the Project. "Summer" emissions are representative of the conditions that may occur during the O_3 season (May 1 to October 31), and "winter" emissions are representative of the conditions that may occur during the balance of the year (November 1 to April 30). Details of the emission calculations are provided in Appendix D.

Table 4.3-9. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
Summer						
2025 (Phase 1)	20.28	123.19	255.39	0.30	51.69	13.26
2026 (Phase 1)	86.24	135.04	282.30	0.42	40.64	12.61
2027 (Phase 2)	42.87	131.79	269.28	0.34	52.79	13.61
2028 (Phase 2)	83.76	103.17	247.30	0.29	35.84	10.55
2029 (Phase 3)	18.63	110.69	236.86	0.32	51.39	12.63
2030 (Phase 3)	82.62	111.28	240.14	0.39	38.21	11.27
2031 (Phase 4)	16.68	103.18	222.38	0.32	51.09	12.29
2032 (Phase 4)	80.07	98.29	213.43	0.37	37.53	10.62
2033 (Phase 5)	36.04	104.55	224.11	0.34	51.22	12.16
2034 (Phase 5)	78.89	81.02	187.93	0.30	34.40	9.50

Table 4.3-9. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
2035 (Phase 6)	35.34	98.61	214.01	0.34	50.88	11.84
2036 (Phase 6)	78.06	74.65	177.80	0.27	33.03	9.00
Winter						
2025 (Phase 1)	45.46	190.42	294.48	0.52	60.46	17.01
2026 (Phase 1)	94.00	144.33	253.92	0.43	41.12	12.85
2027 (Phase 2)	18.14	111.05	204.09	0.30	50.98	12.61
2028 (Phase 2)	126.55	108.34	218.67	0.30	36.25	10.69
2029 (Phase 3)	38.54	120.99	224.77	0.34	52.10	12.97
2030 (Phase 3)	104.84	123.08	226.30	0.41	38.82	11.51
2031 (Phase 4)	36.74	112.28	213.63	0.34	51.76	12.59
2032 (Phase 4)	89.79	106.65	197.33	0.39	37.92	10.75
2033 (Phase 5)	14.31	86.04	170.28	0.30	49.75	11.47
2034 (Phase 5)	78.57	82.54	165.73	0.30	34.40	9.50
2035 (Phase 6)	13.64	81.38	162.60	0.30	49.49	11.24
2036 (Phase 6)	87.27	78.24	161.88	0.28	33.22	9.06
Maximum Daily Emissions	**126.55**	**190.42**	**292.48**	**0.52**	**60.46**	**17.01**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**No**	**No**	**No**	**No**

Source: Appendix D.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD= South Coast Air Quality Management District.

As shown in Table 4.3-9, emissions resulting from the Project construction would exceed the criteria pollutant thresholds established by the SCAQMD for VOC and NO_x emissions. This impact would be potentially significant without mitigation.

The estimated maximum daily construction emissions with mitigation are summarized in Table 4.3-10. **MM-AQ-1** through **MM-AQ-6** will be implemented to reduce the Project's criteria air pollutant emissions during construction, which require that the Project minimize off-road equipment exhaust, restrict idling times, implement a dust control plan, and utilize super-compliant low-VOC paints.

Table 4.3-10. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
Summer						
2025 (Phase 1)	10.21	28.09	252.96	0.24	34.51	8.32
2026 (Phase 1)	24.59	46.20	258.21	0.34	37.36	9.62
2027 (Phase 2)	32.63	33.73	269.70	0.29	35.59	8.66

Table 4.3-10. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
2028 (Phase 2)	23.37	26.70	222.17	0.21	33.37	8.30
2029 (Phase 3)	9.21	27.56	238.28	0.27	35.10	8.51
2030 (Phase 3)	22.03	33.82	219.64	0.31	35.89	9.16
2031 (Phase 4)	7.79	26.06	224.59	0.27	35.10	8.44
2032 (Phase 4)	20.92	31.03	194.23	0.30	35.69	8.94
2033 (Phase 5)	27.61	29.14	228.16	0.29	35.53	8.59
2034 (Phase 5)	20.12	21.99	169.10	0.23	32.94	8.17
2035 (Phase 6)	27.29	27.87	219.43	0.29	35.53	8.59
2036 (Phase 6)	19.60	17.22	158.57	0.19	31.70	7.79
Winter						
2025 (Phase 1)	32.25	61.17	291.52	0.45	41.61	10.54
2026 (Phase 1)	24.91	51.22	224.62	0.35	37.67	9.70
2027 (Phase 2)	8.94	26.91	203.45	0.24	34.51	8.32
2028 (Phase 2)	27.21	28.64	189.07	0.21	33.72	8.39
2029 (Phase 3)	29.07	33.28	226.19	0.29	35.59	8.66
2030 (Phase 3)	23.92	38.78	196.37	0.32	36.38	9.29
2031 (Phase 4)	27.81	30.92	215.91	0.29	35.59	8.59
2032 (Phase 4)	21.70	35.81	173.18	0.31	36.01	9.02
2033 (Phase 5)	6.66	21.69	172.90	0.24	34.45	8.26
2034 (Phase 5)	19.80	23.50	146.90	0.23	32.94	8.17
2035 (Phase 6)	6.33	21.21	166.51	0.24	34.45	8.26
2036 (Phase 6)	20.36	17.80	138.26	0.19	31.86	7.83
Maximum Daily Emissions	**32.63**	**61.17**	**291.52**	**0.45**	**41.61**	**10.54**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix D.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD= South Coast Air Quality Management District.

After implementation of **MM-AQ-2** through **MM-AQ-7**, regional construction emissions would not exceed the applicable SCAQMD thresholds of significance for any criteria pollutant. Therefore, short-term impacts associated with a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment would be **less than significant with mitigation**.

Operational Emissions

Operation of the Project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicular traffic generated by residents, employees, customers, and visitors; energy sources from natural gas usage; and area sources, including the use of landscaping equipment, consumer products, hearths, and from architectural coatings. As discussed in Section 2.3.2.2, Operational Emissions, of Appendix D, pollutant emissions

associated with long-term operations were quantified using CalEEMod using a combination of Project-specific information and CalEEMod default values.

Table 4.3-11 compares the unmitigated maximum daily area, energy, and mobile source emissions associated with Project operation without PDFs and with PDFs over the five interim years evaluated. Details of the emission calculations are provided in Appendix A of Appendix D.

Table 4.3-11. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions – Interim Operational Years - Unmitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Without PDFs						
Summer						
Phase 1 2027	154.48	112.70	796.17	1.82	138.96	38.94
Phases 1–2 2029	294.20	205.63	1,435.27	3.36	261.04	73.47
Phases 1–3 2031	425.12	291.67	2,044.50	4.89	391.60	109.97
Phases 1–4 2033	541.68	364.75	2,551.19	6.18	504.00	141.65
Phases 1–5 2035	642.72	425.64	2,954.15	7.17	591.87	166.88
Winter						
Phase 1 2027	130.79	115.53	522.96	1.72	138.83	38.84
Phases 1–2 2029	247.91	209.71	907.85	3.18	260.75	73.25
Phases 1–3 2031	358.02	296.73	1,271.97	4.62	391.18	109.65
Phases 1–4 2033	455.39	369.99	1,552.15	5.84	503.45	141.24
Phases 1–5 2035	538.59	430.36	1,746.38	6.78	591.21	166.38
Maximum Daily Emissions	**642.72**	**430.36**	**2,954.15**	**7.17**	**591.87**	**166.88**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
With PDFs						
Summer						
Phase 1 2027	127.79	45.00	583.13	1.03	91.33	23.77
Phases 1–2 2029	267.16	91.29	1,219.47	2.28	210.29	54.57
Phases 1–3 2031	398.02	132.12	1,828.43	3.55	339.28	87.82
Phases 1–4 2033	513.27	159.48	2,325.96	4.55	448.65	115.90
Phases 1–5 2035	612.89	175.67	2,718.83	5.27	533.63	137.63
Winter						
Phase 1 2027	105.64	46.37	339.65	0.96	91.19	23.67
Phases 1–2 2029	222.14	94.11	718.63	2.13	210.01	54.35
Phases 1–3 2031	331.94	136.10	1,079.33	3.31	338.86	87.50
Phases 1–4 2033	427.83	163.74	1348.64	4.24	448.11	115.49
Phases 1–5 2035	509.47	179.51	1,531.41	4.90	532.97	137.13
Maximum Daily Emissions	**612.72**	**179.51**	**2,718.83**	**5.27**	**533.63**	**137.63**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*

Table 4.3-11. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions – Interim Operational Years - Unmitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Threshold Exceeded?	Yes	Yes	Yes	No	Yes	Yes

Source: See Appendix D for complete results.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.

As shown in Table 4.3-10, the Project during the interim operational years would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$ without mitigation and without PDFs during the maximum interim year. After incorporation of PDFs, the Project would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOCs, NO_x, CO, PM_{10} and $PM_{2.5}$ during the maximum interim year. Note that in some interim years the Project would not exceed some pollutant thresholds, such as Phase 1 (2027) where the Project would be below all thresholds with PDFs with the exception of VOCs. See Appendix D for detailed tables for each interim operational year.

Table 4.3-12 compares the unmitigated maximum daily area, energy, and mobile source emissions associated with full Project operation under buildout conditions (year 2037) without PDFs and with PDFs. Details of the emission calculations are provided in Appendix D.

Table 4.3-12. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions – Full Buildout – 2037 - Unmitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Without PDFs						
Summer						
Mobile	263.34	196.39	2,200.77	6.42	670.99	172.38
Area	485.72	233.76	1,183.96	1.48	18.90	18.71
Energy	3.64	62.49	29.05	0.40	5.02	5.02
Total Daily Summer Emissions	**752.69**	**492.64**	**3,413.78**	**8.30**	**694.91**	**196.11**
Winter						
Mobile	252.67	210.69	1,861.49	6.02	670.99	172.38
Area	373.63	223.94	95.29	1.43	18.11	18.11
Energy	3.64	62.49	29.05	0.40	5.02	5.02
Total Daily Winter Emissions	**629.94**	**497.12**	**1,985.83**	**7.85**	**694.12**	**195.51**
Maximum Daily Emissions	**752.69**	**497.12**	**3,413.78**	**8.30**	**694.91**	**196.11**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
With PDFs						
Summer						
Mobile	248.26	185.15	2,074.79	6.06	632.58	162.51
Area	472.62	9.82	1,088.66	0.05	0.79	0.60

Table 4.3-12. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions – Full Buildout – 2037 - Unmitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Energy	0.02	0.40	0.34	<0.01	0.03	0.03
Total Daily Summer Emissions	**720.90**	**195.37**	**3,163.79**	**6.11**	**633.41**	**163.14**
Winter						
Mobile	238.21	198.63	1,754.93	5.68	632.58	162.51
Area	360.53	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.40	0.34	<0.01	0.03	0.03
Total Daily Winter Emissions	**598.76**	**199.04**	**1,755.27**	**5.68**	**632.61**	**162.54**
Maximum Daily Emissions	**720.90**	**195.37**	**3,163.79**	**6.11**	**633.41**	**163.14**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Source: See Appendix D for complete results.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.

As shown in Table 4.3-12, the Project would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$ without mitigation and without PDFs. After incorporation of PDFs, the Project still would exceed the numerical thresholds of significance established by the SCAQMD for emissions of VOC, NO_x, CO, PM_{10} and $PM_{2.5}$.

Several mitigation measures have been identified that would reduce the Project's operational criteria air pollutant emissions to the extent feasible (see **MM-AQ-8** through **MM-AQ-11**). The mitigation measures would reduce VOC emissions attributable to cleaning supplies and architectural coatings, as well as reduce emissions attributable to the use of landscaping equipment. However, the emission reduction benefits of these mitigation measures are not readily quantifiable, and thus, mitigated emissions are not presented herein. Further, the magnitude of emission reductions attributable to these mitigation measures is not expected to reduce the Project's operational emissions below SCAQMD's numerical thresholds of significance, as the emission exceedances are primarily attributable to mobile sources (i.e., vehicles).

As discussed in Section 4.3.2, the SCAB has been designated as a national nonattainment area for O_3 and $PM_{2.5}$ and a California nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Construction and operation of the Project would generate VOC and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. Because the Project-generated operational emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$ would exceed the SCAQMD thresholds, the Project would potentially result in a cumulatively considerable increase in emissions of nonattainment pollutants. Therefore, the Project's cumulative air quality impact from operational emissions would be **potentially significant**.

Overlap of Construction and Operation

During Project development, Project construction activities would occur concurrent with partial Project operation. Therefore, the SCAQMD has recommended a calculation of combined construction and operational emissions,

which is provided herein. Appendix D provides detailed tables presenting overlap of construction and operation under summer and winter conditions between the years 2025 and 2036.

Because Project-generated operational emissions result in greater emissions than construction, as buildout of the Project occurs and operational emissions increase, the overlap in emissions between construction and operation increases. As such, the estimated maximum daily criteria air pollutant emissions from simultaneous construction and operational activities without PDFs is estimated to occur in 2036 with approximately 721 pounds per day of VOCs and in 2035 with approximately 525 pounds per day of NO_x, 3,186 pounds per day of CO, 8 pounds per day of SO_x, 643 pounds per day of PM_{10}, and 179 pounds per day of $PM_{2.5}$. With PDFs, the estimated maximum daily criteria air pollutant emissions from simultaneous construction and operational activities are similarly estimated to occur in 2036 with approximately 691 pounds per day of VOCs and in 2035 with approximately 274 pounds per day of NO_x, 2,933 pounds per day of CO, 6 pounds per day of SO_x, 585 pounds per day of PM_{10}, and 149 pounds per day of $PM_{2.5}$. Construction mitigation is anticipated to result in quantifiable emissions reductions and with construction mitigation and PDFs, concurrent construction and operational activities would result in maximum daily criteria air pollutant emissions of approximately 640 pounds per day of VOCs , 204 pounds per day of NO_x, 2,938 pounds per day of CO, 6 pounds per day of SO_x, 569 pounds per day of PM_{10}, and 146 pounds per day of $PM_{2.5}$ in 2035.

Concurrent Project construction and operational activities would result in emissions that would exceed the SCAQMD thresholds and result in a **potentially significant** impact under all scenarios assuming with and without PDFs and with and without mitigation.

Health Effects of Criteria Pollutants

The California Supreme Court's *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 decision (referred to herein as the Friant Ranch decision) (issued on December 24, 2018) addresses the need to correlate mass emission values for criteria air pollutants to specific health consequences and contains the following direction from the California Supreme Court: "The Environmental Impact Report (EIR) must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must explain what the agency *doe*s know and why, given existing scientific constraints, it cannot translate potential health impacts further" (Italics original). The following discussion summarizes the detailed information within Appendix C of Appendix D.

Currently, SCAQMD, CARB, and EPA have not approved a quantitative method to reliably, meaningfully, and consistently translate the mass emission estimates for the criteria air pollutants resulting from the Project to specific health effects. In addition, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days.

In connection with the judicial proceedings culminating in issuance of the Friant Ranch decision, the SCAQMD and the San Joaquin Valley Air Pollution Control District (SJVAPCD) filed amicus briefs attesting to the extreme difficulty of correlating an individual project's criteria air pollutant emissions to specific health impacts. Both SJVAPCD and SCAQMD have among the most sophisticated air quality modeling and health impact evaluation capabilities of the air districts in California. The key, relevant points from SCAQMD and SJVAPCD briefs is summarized herein.

In requiring a health impact type of analysis for criteria air pollutants, it is important to understand how O_3 and PM are formed, dispersed, and regulated. The formation of O_3 and PM in the atmosphere, as secondary pollutants,[8]

[8] Air pollutants formed through chemical reactions in the atmosphere are referred to as secondary pollutants.

involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources. The O_3 reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO_2 is photochemically reformed from nitric oxide. In this way, O_3 is controlled by both NO_x and VOC emissions (NRC 2005). The complexity of these interacting cycles of pollutants means that incremental decreases in one emission may not result in proportional decreases in O_3 (NRC 2005). Although these reactions and interactions are well understood, variability in emission source operations and meteorology creates uncertainty in the modeled O_3 concentrations to which downwind populations may be exposed (NRC 2005). Once formed, O_3 can be transported long distances by wind, and due to atmospheric transport, contributions of precursors from the surrounding region can also be important (EPA 2008). Because of the complexity of O_3 formation, a specific tonnage amount of VOCs or NO_X emitted in a particular area does not equate to a particular concentration of O_3 in that area (SJVAPCD 2015). PM can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x (SJVAPCD 2015). Because of the complexity of secondary PM formation, including the potential to be transported long distances by wind, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area (SJVAPCD 2015). This is especially true for individual projects, like the Project, where project-generated criteria air pollutant emissions are not derived from a single "point source," but from construction equipment and mobile sources (passenger cars and trucks) driving to, from, and around the Project site.

Another important technical nuance is that health effects from air pollutants are related to the concentration of the air pollutant that an individual is exposed to, not necessarily the individual mass quantity of emissions associated with an individual project. For example, health effects from O_3 are correlated with increases in the ambient level of O_3 in the air a person breathes (SCAQMD 2015). However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O_3 levels over an entire region (SCAQMD 2015). The lack of link between the tonnage of precursor pollutants and the concentration of O_3 and $PM_{2.5}$ formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects; rather, it is the concentration of resulting O_3 that causes these effects (SJVAPCD 2015). Indeed, the ambient air quality standards, which are statutorily required to be set by EPA at levels that are requisite to protect the public health, are established as concentrations of O_3 and $PM_{2.5}$ and not as tonnages of their precursor pollutants (SJVAPCD 2015). Because the ambient air quality standards are focused on achieving a particular concentration region-wide, the tools and plans for attaining the ambient air quality standards are regional in nature. For CEQA analyses, project-generated emissions are typically estimated in pounds per day or tons per year and compared to mass daily or annual emission thresholds. While CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the ambient air quality standards, even if a project exceeds established CEQA significance thresholds, this does not mean that one can easily determine the concentration of O_3 or PM that will be created at or near the project site on a particular day or month of the year or what specific health impacts will occur (SJVAPCD 2015).

In regard to regional concentrations and air basin attainment, the SJVAPCD emphasized that attempting to identify a change in background pollutant concentrations that can be attributed to a single project, even one as large as the entire Friant Ranch Specific Plan,[9] is a theoretical exercise. The SJVAPCD brief noted that it "would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have" (SJVAPCD 2015). The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin, but are constantly fluctuating

[9] The Friant Ranch Specific Plan proposed 2,683 single-family age-restricted units, 83 multifamily age-restricted units, 180 non-age-restricted multifamily units, and 250,000 square feet of commercial village within a Village Core that also provides for up to 50 residential units on approximately 942 acres (County of Fresno 2010).

based upon meteorology and other environmental factors. SJVAPCD noted that the currently available modeling tools are equipped to model the impact of all emission sources in the San Joaquin Valley Air Basin on attainment (SJVAPCD 2015). The SJVAPCD brief then indicated that, "Running the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information given the relative scale involved" (SJVAPCD 2015).

SCAQMD and SJVAPCD have indicated that it is not feasible to quantify project-level health impacts based on existing modeling (SCAQMD 2015; SJVAPCD 2015). Even if a metric could be calculated, it would not be reliable because the models are equipped to model the impact of all emission sources in an air basin on attainment and would likely not yield valid information or a measurable increase in O_3 concentrations sufficient to accurately quantify O_3-related health impacts for an individual project.

Nonetheless, following the Supreme Court's Friant Ranch decision, some EIRs where estimated criteria air pollutant emissions exceeded applicable air district thresholds have included a quantitative analysis of potential project-generated health effects using a combination of a regional photochemical grid model[10] and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP–Community Edition).[11] The publicly available health impact assessments (HIAs) typically present results in terms of an increase in health incidences and/or the increase in background health incidences for various health outcomes resulting from the project's estimated increase in concentrations of O_3 and $PM_{2.5}$.[12] To date, the six publicly available HIAs reviewed herein have concluded that the evaluated project's health effects associated with the estimated project-generated increase in concentrations of O_3 and $PM_{2.5}$ represent a small increase in incidences and a very small percent of the number of background incidences, indicating that these health impacts are negligible and potentially within the models' margin of error. Additionally, while the results of the six available HIAs conclude that the project emissions do not result in a substantial increase in health incidences, the estimated emissions and assumed toxicity are also conservatively inputted into the HIA and thus, overestimate health incidences, particularly for $PM_{2.5}$.

As explained in the SJVAPCD brief and noted previously, running the photochemical grid model used for predicting O_3 attainment with the emissions solely from an individual project like the Friant Ranch Project or the Project is not likely to yield valid information given the relative scale involved. The six examples reviewed provide support the SJVAPCD's brief contention that consistent, reliable, and meaningful results may not be provided by methods applied at this time. Accordingly, additional work in the industry and, more importantly, air district participation, is needed to develop a more meaningful analysis to correlate project-level mass criteria air pollutant emissions and

10 The first step in the publicly available HIAs includes running a regional photochemical grid model, such as the Community Multiscale Air Quality model or the Comprehensive Air Quality Model with extensions to estimate the increase in concentrations of O_3 and $PM_{2.5}$ as a result of project-generated emissions of criteria and precursor pollutants. Air districts, such as the SCAQMD, use photochemical air quality models for regional air quality planning. These photochemical models are large-scale air quality models that simulate the changes of pollutant concentrations in the atmosphere using a set of mathematical equations characterizing the chemical and physical processes in the atmosphere (EPA 2017).

11 After estimating the increase in concentrations of O_3 and $PM_{2.5}$, the second step in the six examples includes use of BenMAP or BenMAP–Community Edition to estimate the resulting associated health effects. BenMAP estimates the number of health incidences resulting from changes in air pollution concentrations (EPA 2023c). The health impact function in BenMAP– Community Edition incorporates four key sources of data: (i) modeled or monitored air quality changes, (ii) population, (iii) baseline incidence rates, and (iv) an effect estimate. All of the six example HIAs focused on O_3 and $PM_{2.5}$.

12 The following CEQA documents included a quantitative HIA to address Friant Ranch: (1) World Logistics Center Revised Final EIR (City of Moreno Valley 2019), (2) March Joint Powers Association K4 Warehouse and Cactus Channel Improvements EIR (March JPA 2019), (3) Mineta San Jose Airport Amendment to the Airport Master Plan EIR (City of San Jose 2019), (4) City of Inglewood Basketball and Entertainment Center Project EIR (City of Inglewood 2019), (5) San Diego State University Mission Valley Campus Master Plan EIR (SDSU 2019), and (6) California State University Dominguez Hills 2018 Campus Master Plan EIR (CSU Dominguez Hills 2019).

health effects for decision makers and the public. Furthermore, at the time of writing, no HIA has concluded that health effects estimated using the photochemical grid model and BenMAP approach are substantial, provided that the estimated project-generated incidences represent a very small percent of the number of background incidences, potentially within the models' margin of error.

Construction of the Project would result in emissions that would not exceed the SCAQMD thresholds for criteria air pollutants, including VOC and NO_x, after implementation of **MM-AQ-2** through **MM-AQ-7**. Operation of the Project, however, would result in exceedances of regional thresholds for emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$, even after implementation of PDFs and mitigation.

As discussed in Section 4.3.1.2, Pollutants and Effects, health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue. VOCs and NO_x are precursors to O_3, for which the SCAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SCAB due to O_3 precursor emissions tend to be found downwind of the source location because of the time required for the photochemical reactions to occur. Further, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur, because exceedances of the O_3 NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. As described above, due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project's emissions of O_3 precursors is speculative. That being said, because the Project would exceed the SCAQMD VOC and NO_x thresholds during Project operations, the Project could contribute to health effects associated with O_3.

Health effects associated with NO_x and NO_2 (which is a constituent of NO_x) include lung irritation and enhanced allergic responses (see Section 4.3.1.2). Although Project-related NO_x emissions would exceed the SCAQMD operational mass daily thresholds, because the SCAB is a designated attainment area for NO_2 (and NO_2 is a constituent of NO_x) and the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards,[13] it is not anticipated that the Project would cause an exceedance of the NAAQS and CAAQS for NO_2 or result in potential health effects associated with NO_2 and NO_x. However, because the Project would exceed the SCAQMD NO_x threshold during Project operations, the Project could contribute to health effects associated with NO_x and NO_2.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (see Section 4.3.1.2). CO tends to be a localized impact associated with congested intersections. The potential for CO hotspots is discussed under Threshold 3 and determined to be less than significant. Thus, the Project's CO emissions would not contribute to significant health effects associated with CO.

Health effects associated with PM_{10} and $PM_{2.5}$ include premature death and hospitalization, primarily for worsening of respiratory disease (see Section 4.3.1.2). Operation of the Project would exceed the SCAQMD thresholds for PM_{10} and $PM_{2.5}$. As such, the Project would potentially contribute to exceedances of the NAAQS and CAAQS for particulate matter and obstruct the SCAB from coming into attainment for these pollutants. Because the Project has the potential to contribute substantial particulate matter during operation, the Project could result in associated health effects.

[13] See Table 4.3-2, which shows that ambient concentrations of NO_2 at the Riverside-Rubidoux monitoring station have not exceeded the NAAQS or CAAQS between 2020 and 2022.

In summary, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and methods available to quantitatively evaluate health effects may not be appropriate to apply to emissions associated with the Project, which cannot be estimated with a high-level of accuracy.

Threshold 3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Thresholds Analysis

Construction activities associated with the Project would result in temporary sources of on-site fugitive dust and construction equipment emissions. An LST analysis has been prepared to determine potential impacts to nearby sensitive receptors during construction of the Project. As indicated in the discussion of the thresholds of significance, the SCAQMD recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ impacts due to construction activities because of sensitive receptors in the immediate vicinity of the Project site. The impacts were analyzed using methods consistent with those in the SCAQMD's Final Localized Significance Threshold Methodology (2009). According to the Final Localized Significance Threshold Methodology, "off-site mobile emissions from the project should not be included in the emissions compared to the LSTs" (SCAQMD 2009). Trucks and worker trips associated with the Project are not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways since emissions would be relatively brief in nature and would cease once the vehicles pass through the main streets. Nonetheless, in an effort to conservatively capture potential vehicle activity within the Project boundary (i.e., fence line), a small portion (i.e., 0.25 miles) of the off-site vehicle travel for worker vehicles, vendor trucks, and haul trucks were conservatively treated as on-site emissions for the LST analysis.

The estimated maximum daily unmitigated on-site construction emissions generated by the Project are presented in Table 4.3-13 and compared to the applicable SCAQMD LSTs.

Table 4.3-13. Localized Significance Thresholds Analysis for Project Construction - Unmitigated

Maximum On-Site Emissions	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day			
Summer				
2025 (Phase 1)	110.16	129.26	25.69	6.98
2026 (Phase 1)	108.85	137.11	4.20	3.48
2027 (Phase 2)	120.34	21.37	2.99	7.08
2028 (Phase 2)	89.35	0.48	0.12	2.64
2029 (Phase 3)	100.90	21.37	2.99	6.21
2030 (Phase 3)	94.40	0.54	0.13	2.58
2031 (Phase 4)	94.69	138.45	24.56	5.93
2032 (Phase 4)	83.24	119.37	2.69	2.11
2033 (Phase 5)	97.05	148.87	24.31	5.70
2034 (Phase 5)	71.58	106.06	2.21	1.71
2035 (Phase 6)	92.19	146.44	23.97	5.38
2036 (Phase 6)	67.55	103.40	2.04	1.57

Table 4.3-13. Localized Significance Thresholds Analysis for Project Construction - Unmitigated

Maximum On-Site Emissions	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day			
Winter				
2025 (Phase 1)	162.10	196.16	27.73	8.76
2026 (Phase 1)	116.31	149.21	4.39	3.65
2027 (Phase 2)	99.17	21.36	2.99	6.33
2028 (Phase 2)	93.01	0.49	0.12	2.70
2029 (Phase 3)	109.99	21.37	2.99	6.44
2030 (Phase 3)	104.42	0.55	0.14	2.70
2031 (Phase 4)	103.38	153.55	24.78	6.13
2032 (Phase 4)	89.93	130.18	2.76	2.17
2033 (Phase 5)	78.74	118.93	23.81	5.25
2034 (Phase 5)	71.91	107.58	2.21	1.71
2035 (Phase 6)	74.44	116.46	23.56	5.01
2036 (Phase 6)	70.84	109.17	2.06	1.59
Maximum	**162.10**	**196.16**	**27.73**	**8.76**
SCAQMD LST	*228*	*1,288*	*11*	*6*
LST Exceeded?	**No**	**No**	**Yes**	**Yes**

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
LSTs are shown for a 3.75-acre project site corresponding to a distance to a sensitive receptor of 25 meters. The estimates reflect control of fugitive dust (watering two times daily) required by SCAQMD Rule 403.

As depicted in Table 4.3-13, the Project would result in emissions of PM_{10} and $PM_{2.5}$ that would exceed the applicable SCAQMD LSTs without mitigation. As such the Project would result in potentially significant impacts related to construction LST prior to mitigation.

Localized construction emissions with implementation of **MM-AQ-2** through **MM-AQ-7** are shown in Table 4.3-13 below.

Table 4.3-14. Localized Significance Thresholds Analysis for Project Construction - Mitigated

Maximum On-Site Emissions	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day			
Summer				
2025 (Phase 1)	15.05	126.84	8.52	2.04
2026 (Phase 1)	20.01	113.03	0.92	0.48
2027 (Phase 2)	22.27	157.59	8.62	2.13
2028 (Phase 2)	12.89	96.80	0.76	0.40
2029 (Phase 3)	17.77	142.23	8.57	2.09
2030 (Phase 3)	16.93	111.72	0.88	0.47

Table 4.3-14. Localized Significance Thresholds Analysis for Project Construction - Mitigated

Maximum On-Site Emissions	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day			
2031 (Phase 4)	17.57	140.66	8.57	2.09
2032 (Phase 4)	15.98	100.17	0.85	0.43
2033 (Phase 5)	21.64	152.92	8.61	2.13
2034 (Phase 5)	12.55	87.23	0.75	0.38
2035 (Phase 6)	21.46	151.86	8.61	2.13
2036 (Phase 6)	10.12	84.17	0.70	0.35
Winter				
2025 (Phase 1)	32.84	193.19	8.88	2.29
2026 (Phase 1)	23.20	119.91	0.94	0.50
2027 (Phase 2)	15.03	126.79	8.52	2.04
2028 (Phase 2)	13.31	99.42	0.77	0.40
2029 (Phase 3)	22.28	157.61	8.62	2.13
2030 (Phase 3)	20.12	117.97	0.90	0.48
2031 (Phase 4)	22.02	155.82	8.62	2.13
2032 (Phase 4)	19.09	106.03	0.86	0.44
2033 (Phase 5)	14.39	121.55	8.51	2.04
2034 (Phase 5)	12.87	88.75	0.75	0.38
2035 (Phase 6)	14.27	120.36	8.51	2.04
2036 (Phase 6)	10.41	85.56	0.70	0.35
Maximum	**32.84**	**193.19**	**8.88**	**2.29**
SCAQMD LST	*228*	*1,288*	*11*	*6*
LST Exceeded?	**No**	**No**	**No**	**No**

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
Localized significance thresholds are shown for a 3.75-acre project site corresponding to a distance to a sensitive receptor of 25 meters. The estimates reflect implementation of **MM-AQ-2** through **MM-AQ-7**.

As depicted in Table 4.3-14, implementation of **MM-AQ-2** through **MM-AQ-7** would reduce the Project's construction emissions to below the applicable SCAQMD LSTs and associated impacts would be **less than significant with mitigation.**

Health Effects of Carbon Monoxide (Potential for Carbon Monoxide Hotspots)

Mobile source impacts occur on two scales. Regionally, Project-related travel would add to regional trip generation and increase the VMT within the local airshed and the SCAB. Locally, traffic generated by the Project would be added to the local roadway system near the Project site. If such traffic occurs during periods of poor atmospheric ventilation, is composed of many vehicles cold-started and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-Project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. Because of continued improvement in

vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing.

At the time that the SCAQMD Handbook (1993) was published, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO. In 2007, the SCAB was designated in attainment for CO under both the CAAQS and NAAQS as a result of the steady decline in CO concentrations in the SCAB due to turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities. The SCAQMD conducted CO modeling for the 2003 AQMP[14] (SCAQMD 2003b) for the four worst-case intersections in the SCAB: (1) Wilshire Boulevard and Veteran Avenue, (2) Sunset Boulevard and Highland Avenue, (3) La Cienega Boulevard and Century Boulevard, and (4) Long Beach Boulevard and Imperial Highway. At the time the 2003 AQMP was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard and Veteran Avenue. When added to the maximum 1-hour CO concentration from 2020 through 2022 at the Riverside-Rubidoux monitoring station (see Table 4.3-2), which was 3.3 ppm in 2022, the 1-hour CO would be 7.9 ppm, while the CAAQS is 20 ppm.

The 2003 AQMP also projected 8-hour CO concentrations at these four intersections for 1997 and from 2002 through 2005. From years 2002 through 2005, the maximum 8-hour CO concentration was 3.8 ppm at the Sunset Boulevard and Highland Avenue intersection in 2002; the maximum 8-hour CO concentration was 3.4 ppm at the Wilshire Boulevard and Veteran Avenue in 2002. Adding the 3.8 ppm to the maximum 8-hour CO concentration from 2020 through 2022 at the Riverside-Rubidoux monitoring station (see Table 4.3-2), which was 1.8 ppm in 2021, the 8-hour CO would be 5.6 ppm, while the CAAQS is 9.0 ppm.

Accordingly, CO concentrations at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be over 100,000 vehicles per day (e.g., intersections exceeding 100,000 vehicles per day do not necessarily result in a CO hotspot, but instead may require additional analysis per the methodology applied herein).

The traffic analysis prepared for the Project evaluated average daily trips at 99 intersections within the Project area. Under 2045 conditions with full buildout of the Project, the maximum daily intersection volume was estimated to be 84,490 trips, which occurs at the Sycamore Canyon Boulevard and Meridian Parkway/Alessandro Boulevard intersection (Appendix K3). For additional context, the median daily intersection volume was estimated to be 36,244, with the minimum daily intersection volume estimated to be 3,509.

Regarding potential CO hotspots during construction, the maximum daily trips during construction are estimated to be 2,630 daily trips (during building construction/architectural coating activity overlap for Phase 3 construction), which would be substantially less than operational trip generation at Project buildout (i.e., 76,413 net external trips per day). Thus, the maximum daily intersection volume with the addition of these vehicles on the roadway network during construction would be less than during operations. In addition, as identified in Table 4.3-14, the Project would not result in on-site CO emissions that would exceed the SCAQMD LST.

Because the Project would not contribute vehicles to any study intersection that would experience more than 100,000 vehicles per day during construction or operations and would not result in on-site CO emissions that would exceed the SCAQMD LST threshold during construction, a CO hotspot is not anticipated to occur, and associated

[14] SCAQMD's CO hotspot modeling guidance has not changed since 2003.

impacts would be less than significant. As such, potential Project-generated impacts associated with CO hotspots during construction and operations would be **less than significant**.

Toxic Air Contaminants

Construction Health Risks

As discussed in Section 4.3.3 and detailed in Appendix D, a construction HRA was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for proximate residential receptors because of Project construction. Results of the construction HRA under unmitigated conditions are presented in Table 4.3-15.

Table 4.3-15. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	UTME (m)	UTMN (m)	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential off site	481869.14	3750992.04	Per Million	63.2	10	**Potentially Significant**
Chronic Hazard Index – Residential off site	481869.14	3750992.04	Index Value	0.04	1.0	Less than Significant
Maximum Individual Cancer Risk – Residential on site	481429.58	3751898.87	Per Million	33.2	10	**Potentially Significant**
Chronic Hazard Index – Residential on site	481429.58	3751898.87	Index Value	0.02	1.0	Less than Significant
Maximum Individual Cancer Risk – Worker off site	480908.71	3751199.27	Per Million	0.3	10	Less than Significant
Chronic Hazard Index – Worker off site	480908.71	3751199.27	Index Value	0.01	1.0	Less than Significant
Maximum Individual Cancer Risk – Worker on site	481429.58	3751898.87	Per Million	0.5	10	Less than Significant
Chronic Hazard Index – Worker on site	481429.58	3751898.87	Index Value	0.02	1.0	Less than Significant
Maximum Individual Cancer Risk – Other Non-Residential Sensitive Receptor* off site	480908.71	3751199.27	Per Million	20.8	10	**Potentially Significant**
Chronic Hazard Index – Other Non-Residential Sensitive Receptor* off site	480908.71	3751199.27	Index Value	0.01	1.0	Less than Significant

Source: SCAQMD 2023e.
Notes: UTME = Universal Transverse Mercator East; m = meters; UTMN = Universal Transverse Mercator North; CEQA = California Environmental Quality Act.
See Appendix D.
* The other non-residential sensitive receptor with the highest health risk is Vista del Lago High School.

As shown in Table 4.3-15, Project construction activities would result in a Residential Maximum Individual Cancer Risk of 63.2 in 1 million for off-site receptors and 33.2 in 1 million for on-site receptors, which exceed the significance threshold of 10 in 1 million. The Project would also exceed the cancer risk thresholds for the nearest non-residential sensitive receptor (Vista del Lago High School) at 20.8 in 1 million. Project construction would result in a Residential Chronic Hazard Index of 0.04 for off-site receptors and 0.02 for on-site receptors, which is below

the 1.0 significance threshold. The Project's construction TAC health risk impacts would be potentially significant, and mitigation would be required to reduce these impacts to less than significant.

Table 4.3-16 shows the Project's construction health risk results with implementation of **MM-AQ-2**.

Table 4.3-16. Construction Health Risk Assessment Results – Mitigated

Impact Parameter	UTME (m)	UTMN (m)	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential off site	481869.14	3750992.04	Per Million	8.0	10	Less than Significant
Chronic Hazard Index – Residential off site	481869.14	3750992.04	Index Value	0.01	1.0	Less than Significant
Maximum Individual Cancer Risk – Residential on site	481429.58	3751898.87	Per Million	3.7	10	Less than Significant
Chronic Hazard Index – Residential on site	481429.58	3751898.87	Index Value	0.002	1.0	Less than Significant
Maximum Individual Cancer Risk – Worker off site	480908.71	3751199.27	Per Million	0.004	10	Less than Significant
Chronic Hazard Index – Worker off site	480908.71	3751199.27	Index Value	0.001	1.0	Less than Significant
Maximum Individual Cancer Risk – Worker on site	481429.58	3751898.87	Per Million	0.1	10	Less than Significant
Chronic Hazard Index – Worker on site	481429.58	3751898.87	Index Value	0.002	1.0	Less than Significant
Maximum Individual Cancer Risk – Other Non-Residential Sensitive Receptor* off site	480908.71	3751199.27	Per Million	2.5	10	Less than Significant
Chronic Hazard Index – Other Non-Residential Sensitive Receptor* off site	480908.71	3751199.27	Index Value	0.001	1.0	Less than Significant

Source: SCAQMD 2023e.
Notes: UTME = Universal Transverse Mercator East; m = meters; UTMN = Universal Transverse Mercator North; CEQA = California Environmental Quality Act.
See Appendix D.
Results include implementation of **MM-AQ-2**.
* The other non-residential sensitive receptor with the highest health risk is Vista del Lago High School.

The HRA results after incorporation of **MM-AQ-2** show that the Residential Maximum Individual Cancer Risk for off-site receptors, on-site receptors, and nonresidential receptors would be reduced below the significance threshold of 10 in 1 million. Thus, regarding exposure of sensitive receptors to substantial pollutant concentrations, Project-specific impacts during construction would be **less than significant with mitigation**.

Operational Health Risks

As detailed by the SCAQMD, projects that typically result in low operational health risk impacts include residential uses (e.g., apartments, condos, mobile homes, single family homes), commercial uses (e.g., offices, banks, government, pharmacies), recreational uses (e.g., parks, restaurants, golf courses, health clubs, hotels, theaters), educational uses (e.g., daycares, schools, colleges, libraries, churches), and retail uses (e.g., auto care,

supermarkets, malls) (SCAQMD 2023f). The Project is a mixed-use development that would include residential, retail, hotel, educational, and park land uses, all of which were identified by SCAQMD as having low potential health risk impacts. Operation of the Project would not result in any non-permitted direct emissions (e.g., those from a stationary source such as diesel generators)[15] or in a substantial increase in diesel vehicles (i.e., delivery trucks greater than 100 per day). Thus, the Project would not result in a long-term (i.e., 9-year, 30-year, or 70-year) operational source of TAC emissions.

Additionally, the 2022 Title 24 Standards require MERV 13 air filters in new construction, which help to capture outdoor air particles. MERV 13 filters have been demonstrated to remove approximately 90% of particulate matter from intake air (Singer et al. 2016) and therefore would result in a substantial reduction in health risk to on-site sensitive receptors.

Project impacts associated with exposing sensitive receptors to substantial pollutant concentrations, specifically health risks associated with operation, would be **less than significant.**

Cumulative Health Risk

The SCAQMD does not have an established cumulative health risk approach, but has initiated a public process (including four working group meetings as of January 2024) for the development of additional guidance for public agencies when they evaluate cumulative air quality impacts from increased concentrations of TACs for projects subject to the requirements of CEQA.

As part of this public process, the SCAQMD has not included most construction activity in its cumulative health risk analysis recommendations, since construction is typically short term. However, the draft applicability framework of the SCAQMD's cumulative health risk concept includes long-term construction, with transportation projects such as high-speed rail provided as the example. The draft applicability framework does not define what number of years equates to long-term construction. Because construction of the Project is assumed to have a duration of 10 years, it may or may not qualify as a short-term project under the final SCAQMD guidance, if/once issued. Nonetheless, as described above, the Project itself would result in health risk impacts from construction that would be less than significant with implementation of **MM-AQ-2**. Therefore, it is anticipated that the Project would also not result in a cumulatively considerable health risk impact from construction.

In addition, as described previously, the SCAQMD has indicated that projects that consist of primarily residential development, such as the Project, would screen out of a cumulative health risk analysis for operations since they tend to have low potential cancer risk (SCAQMD 2023f).

Overall, based on the preceding considerations, potential cumulative health risk associated with Project development would be potentially significant before implementation of **MM-AQ-2,** and **less than significant with this mitigation**.

Valley Fever

Valley fever is not highly endemic to Riverside County, with an incident rate of 18.4 cases per 100,000 people in 2021 (CDPH 2021). The California counties considered highly endemic for valley fever include Kern (306.2 per

[15] Stationary sources result in on-site emissions and could generate TAC emissions; however, during the SCAQMD permitting process, an HRA would be performed and control measures would be implemented if required to reduce potential impacts to sensitive receptors.

100,000), Kings (108.3 per 100,000), Tulare (65.8 per 100,000), San Luis Obispo (61.0 per 100,000), Fresno (39.8 per 100,000), Merced (28.3 per 100,000), and Monterey (27.0 per 100,000), which accounted for 52.1% of the reported cases in 2021 (CDPH 2021).

Even if present at the site, construction activities may not result in increased incidence of valley fever. Propagation of valley fever is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. Valley fever spores can be released when filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to valley fever does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

In order to reduce fugitive dust from the Project and minimize adverse air quality impacts, the Project would employ dust control measures in accordance with the SCAQMD Rules 401 and 403, which limit the amount of fugitive dust generated during construction. These requirements are consistent with California Department of Public Health recommendations for the implementation of dust control measures, including regular application of water during soil-disturbance activities, to reduce exposure to valley fever by minimizing the potential that the fungal spores become airborne (CDPH 2013). Further, regulations designed to minimize exposure to valley fever hazards are included in Title 8 of the California Code of Regulations and would be complied with during the Project's construction phase (California Department of Industrial Relations 2017).

In summary, the Project would not result in a significant impact attributable to valley fever exposure based on its geographic location and compliance with applicable regulatory standards and dust control measures, which will serve to minimize the release of and exposure to fungal spores. Therefore, impacts associated with valley fever exposure for sensitive receptors would be **less than significant**.

Threshold 4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction and operation of the Project would result in various emissions; however, criteria air pollutants, fugitive dust, and TACs are addressed under Thresholds 2 and 3, above. As such, this impact analysis is focused on the potential for an odor impact to occur. The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speed and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be generated from vehicles and/or equipment exhaust emissions during construction of the Project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be considered **less than significant**.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project does not propose and would not engage in any of these activities or other potential activities that would generate operational odors. The Project entails operation of residences, retail, hotel, educational, and

park land uses and would not create any new sources of odors during operation. Therefore, the Project would result in an odor impact that is **less than significant**.

4.3.5 Significance of Impacts Before Mitigation

Threshold 1: Air Quality Plan Consistency

The potential for the Project to conflict with or obstruct implementation of the applicable air quality plan, specifically the SCAQMD 2022 AQMP, is **potentially significant**.

Threshold 2: Potential to Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant

Construction

Construction of the Project would exceed the criteria air pollutant construction thresholds established by the SCAQMD for VOC and NO_x emissions, resulting in a **potentially significant** impact related to the potential to result in a cumulatively considerable net increase in any nonattainment criteria air pollutant.

Operation

Operation the Project would exceed the criteria air pollutant operational thresholds established by the SCAQMD for emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$ resulting in a **potentially significant** impact related to the potential to result in a cumulatively considerable net increase in any nonattainment criteria air pollutant.

Threshold 3: Exposure of Sensitive Receptors

Localized Significance Thresholds

Construction of the Project would result in emissions of PM_{10} and $PM_{2.5}$ that would exceed the applicable SCAQMD LSTs resulting in **potentially significant** impact.

Carbon Monoxide Hotspots

Operation of the Project would result in a **less than significant** impact related to CO hotspots.

Health Risk Assessment

The Project construction TAC health risk impacts would be **potentially significant** for Maximum Individual Cancer Risk – Residential off site, Maximum Individual Cancer Risk – Residential on site, and Maximum Individual Cancer Risk – Other Non-Residential Sensitive Receptor off site (Vista del Lago High School).

Potential operational health risk would result in a **less than significant** impact.

Potential cumulative health risk would be **potentially significant** due to the potentially significant construction-related health risk impact.

Valley Fever

Impacts associated with valley fever exposure for sensitive receptors would be **less than significant**.

Threshold 4: Other Emissions (Odors)

The Project would result in **less than significant** impacts to other emissions, specifically odors.

4.3.6 Mitigation Measures

4.3.6.1 Previously Adopted Mitigation Measures

1999 EIR

The 1999 EIR included mitigation measures to reduce impacts related to air quality, as summarized below.

Construction-Related Impacts

The 1999 EIR air quality analysis concluded that given the expected rate of development, it was unlikely that construction-related emissions would exceed the SCAQMD thresholds. However, grading must conform with the standards established by the SCAQMD's Rule 403, so the following measures from the CEQA Air Quality Handbook were included to reduce the original SP 218's construction-related criteria air pollutant emissions (Table 11-4 in SCAQMD 1993):

- Apply soil stabilizers to all inactive construction areas.
- Replace ground cover in disturbed areas as quickly as possible.
- Enclose, cover, or regularly water exposed soil piles.
- Water active sites at least twice daily and water unpaved parking and staging areas at least three times daily.
- Suspend all excavating and grading operations when wind speeds exceed 25 miles per hour or during second stage smog alerts.
- Cover all haul truck loads.
- Institute a program to sweep paved roads each day if visible soil material is present.
- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Enforce traffic speeds on all unpaved roads at 15 miles per hour or less.
- Pave construction roads that have daily traffic volume of more than 50 trips by construction equipment or 150 trips by all vehicles.
- Pave all construction roads at least 100 feet on to the site from the main road.

Operation-Related Impacts

The 1999 EIR air quality analysis included mitigation measures to reduce criteria air pollutant emissions during operation from mobile sources and energy consumption. These measures are discussed separately below.

Mobile Source Emissions

To reduce emissions from mobile sources during operation of the original SP 218, the 1999 EIR required that all businesses within the commercial and office areas of the Specific Plan Area with 250 or more employees must conform with the SCAQMD's Regulation XV, which is designed to increase average vehicle ridership for employees commuting trips.

Additionally, the air quality analysis included a list of mitigation measures suggested by the SCAQMD for reducing on-road mobile source emissions (Tables 11-6a and 11-6b in SCAQMD 1993). While the original SP 218 already incorporated some measures into project design (e.g., construction of on-site transit stops), the remaining measures listed were to be incorporated into the original SP 218 where appropriate and feasible. The SCAQMD's suggested mitigation measures for reducing on-road mobile source emissions are included in the list below (City of Moreno Valley 1999b).

AQMP Potential Mitigation Measures

The following potential mitigation measures are from Table 14 of the 1999 EIR (City of Moreno Valley 1999b).

Residential Land Use

- Include satellite telecommunications centers in subdivisions
- Establish shuttle services from residential subdivisions to commercial core areas or major mass transit centers
- Construct on-site or off-site bus turnouts and shelters
- Construct off-site pedestrian facilities
- Construct, contribute, or dedicate land for off-site bicycle trails to link a project to designated bike routes
- Contribute funds to regional transit systems
- Synchronize traffic lights on roads impacted by development

Commercial Land Use

- Provide video-conferencing facilities
- Implement a home dispatching system
- Use satellite offices
- Establish a home-based telecommuting program
- Set up a resident worker training program to improve jobs/housing balance
- Implement compressed work weeks
- Develop a program to minimize use of fleet vehicles during smog alerts
- Use low-emission fleet vehicles
- Require employers not subject to Regulation XV to provide commuter information areas
- Develop a trip reduction plan for businesses with less than 100 employees or multitenant worksites
- Reduce employee parking for businesses subject to Regulation XV
- Implement a lunch shuttle service to food establishments
- Establish a shuttle service from residential core areas to worksites

- Provide shuttles to mass transit centers
- Provide on-site child care and after-school facilities or contribute to development of nearby facilities
- Provide on-site employee services such as cafeterias and banks
- Construct off-site bicycle facilities to link the project with designated bike routes
- Include bike lockers or racks on site and/or provide showers
- Construct on-site and off-site pedestrian facilities
- Require retail facilities or special event centers to offer incentives to transit riders
- Construct on-site or off-site transit facilities
- Include residential units in commercial projects
- Contribute funds to regional transit systems
- Implement or contribute to public outreach programs
- Synchronize traffic lights on roads impacted by development
- Design drive-throughs for efficient traffic flow
- Schedule truck deliveries for off-peak hours and provide on-site loading zones
- Provide preferential parking for carpools
- Implement parking lot circulation plans
- Implement parking discounts for ridesharers
- Utilize excess parking spaces for park-and-ride lots
- Charge visitors to park

Minimize Construction Activity Emissions

- Water site and clean equipment morning and evening
- Spread soil binders on site, unpaved roads, and parking areas
- Reestablish ground cover on construction site through seeding and watering
- Employ activity management techniques, such as extending the construction period; reducing the number of pieces of equipment used simultaneously; increasing the distance between the emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak hours
- Pave construction roads, and sweep streets if silt is carried over the adjacent public thoroughfares
- Require a phased schedule for construction activities to even out emission peaks
- Suspend grading operations during first- and second-stage smog alerts
- Wash off trucks leaving the site
- Maintain construction equipment engines by keeping them tuned
- Use low-sulfur fuel for equipment
- Avoid using temporary power; use power from the grid

Reduce Construction-Related Traffic Congestion

- Provide rideshare and transit incentives for construction personnel
- Configure construction parking to minimize traffic interference
- Minimize obstruction of through traffic lanes
- Provide a flagperson to guide traffic properly and ensure safety at construction sites
- Schedule operations affecting traffic for off-peak hours

Control Project Operation Emissions

- Install Best Available Control Technology
- Provide emissions offsets when necessary per Regulation XIII
- Limit emissions from vehicle trips
- Implement a trip reduction plan per SCAQMD Regulation XV
- Promote transportation management associations
- Establish telecommuting programs, alternative work schedules, and satellite work centers
- Schedule goods movements for off-peak traffic hours
- Provide local shuttle and regional transit systems and transit shelters
- Provide bicycle lanes, storage areas, and amenities, and ensure efficient parking management
- Synchronize traffic signals
- Provide dedicated turn lanes as appropriate
- Work with cities/developers/citizens in the region to implement transportation demand management goals
- Minimize indirect-source emissions
- Implement energy conservation measures beyond state and local requirements
- Include energy costs in capital expenditure analyses
- Install energy-efficient street lighting
- Landscape with native drought-resistant species to reduce water consumption and to provide passive solar benefits
- Provide incentives for solid waste recycling
- Minimize building energy requirements
- Improve the thermal integrity of buildings, and reduce the thermal load with automated time clocks or occupant sensors
- Introduce window glazing, wall insulation, and efficient ventilation methods
- Introduce efficient heating and other appliances, such as water heaters, cooking equipment, refrigerators, furnaces, and boiler units
- Incorporate appropriate passive solar design and solar heaters
- Use devices that minimize the combustion of fossil fuels
- Capture waste heat and reemploy it in nonresidential buildings

Limit Vehicle Emissions at School Sites

- Provide peripheral park-and-ride lots at school sites
- Discourage traffic by providing preferential parking to high occupancy vehicles and shuttle services, and charge parking lot fees to low occupancy vehicles
- Provide bicycle and bus access at school sites
- Provide temporary roadway controls at peak-hours, such as one-way streets; install directional traffic signs, and synchronized traffic signals to relieve congestion of surrounding streets
- Provide adequate ingress and egress at all entrances to school sites to minimize vehicle idling at curbsides

Minimize Potential Public Exposure to Toxic Air Emissions

- Integrate additional mitigation measures into site design, such as the creation of buffering areas between a potential sensitive receptor's boundary and a potential pollution source
- Require design features, operating procedures, preventive maintenance, operator training, and emergency response planning to prevent the release of toxic pollutants

Energy Consumption Emissions

To reduce emissions from energy consumption during operation of the original SP 218, the 1999 EIR required conformance with the building design requirements contained in the California Code of Regulations, Title 24. Additionally, the EIR required the original SP 218 to incorporate at least one of the following building conservation measures in each housing development, to be verified through inspection by the City of Moreno Valley Division of Building and Safety (City of Moreno Valley 1999b):

- Light-colored roofing
- Double-pane windows
- Solar water heaters
- An alternative approved by the Community and Economic Development Department

Localized Carbon Monoxide Impacts

To ensure that the original SP 218 would not result in significant localized CO impacts, the 1999 EIR required implementation of the roadway improvements recommended in the project-specific traffic report prepared for the original SP 218 (O'Rourke Engineering 1996). The roadway improvement mitigation measures include signalization of intersections with deteriorating service, widening or extension of several existing roadways, and intersection improvements. These improvements are discussed in further detail in the transportation section of the 1999 EIR.

Consistency with Regional Plans

To address inconsistency with the SCAQMD AQMP, the 1999 EIR required the original SP 218 to implement strategies identified by SCAQMD (listed above, in AQMP Potential Mitigation Measures). The strategies include transportation control measures to reduce smog and traffic congestion by reducing vehicle trips and miles traveled. The list of SCAQMD recommended strategies were found to include regional strategies that were beyond the scope of the original SP 218 to implement. As such, and given that no other mitigation was available, the impact related to consistency with a regional plan remained significant after implementation of mitigation.

2003 Supplemental EIR

No mitigation was identified.

2005 Addendum

No mitigation was identified.

Summary

The previous mitigation measures are not carried through to the SEIR and will be rescinded and replaced with the below mitigation measures.

4.3.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

MM-AQ-1 Update the Regional Growth Forecast. The applicant has informed the Southern California Association of Governments (SCAG) of the Project so that SCAG's next Regional Transportation Plan/Sustainable Communities Strategy, Connect SoCal 2024, can appropriately reflect residential housing, population, and employment locations and forecasts in Moreno Valley. The updated information provided to SCAG is anticipated to be used by the South Coast Air Quality Management District (SCAQMD) to update the Air Quality Management Plan (AQMP). The applicant shall prepare and submit a letter notifying SCAQMD of this revised forecast for use in the future updates to the plan as required.

MM-AQ-1 *is not a quantifiable measure.*

MM-AQ-2 Construction Equipment Exhaust Minimization. Prior to the commencement of any construction activities, the applicant or its designee shall provide evidence to the City of Moreno Valley (City) that (1) for off-road equipment with engines rated at 25 horsepower or greater, no construction equipment shall be used that is less than Tier 4 Final, and (2) all generators, welders, and air compressors used during building construction and architectural coating of structures during residential (including combined residential and parking structure), retail, education (school), and hotel phases shall be electrically powered. Notably, generators, welders, and air compressors for parks/recreational and asphalt for circulation and parking phases are excluded from electrification requirements in (2) due to feasibility considerations, but still subject to Tier 4 Final requirements in (1). An exemption from this requirement may be granted if (1) the applicant documents equipment with Tier 4 Interim engines are not reasonably available, and (2) the required corresponding reductions in criteria air pollutant emissions can be achieved for the project from other combinations of construction equipment. Before an exemption may be granted, the applicant's construction contractor shall: (1) demonstrate that at least 3 construction fleet owners/operators in Riverside County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Riverside County during the desired construction schedule; and (2) the proposed replacement equipment has been evaluated using California Emissions Estimator Model (CalEEMod) or other industry standard emission estimation method and documentation provided to the City to confirm that necessary project-generated emissions reductions are achieved.

MM-AQ-2 *is quantified in the construction analysis within the CalEEMod mitigation module, wherein all off-road equipment with engines rated at 25 horsepower or greater were assumed to meet Tier 4 Final regulations and off-road equipment with engines rated less than 25 horsepower were assumed to be electrically powered.*

MM-AQ-3 Additional Construction Equipment Emission Reductions. Prior to the issuance of grading permits, the Project applicant or its designee shall provide evidence to the City that the following strategies shall be implemented during the Project's construction phase:

a. Use electric or hybrid powered equipment for generators and other small pieces of equipment over 25 horsepower (e.g., forklifts), as commercially available.
b. Use cleaner-fuel equipment such as replacing diesel fuel with compressed natural gas (CNG) or renewable diesel, as commercially available.

Commercially available equipment is herein defined as equipment sourced within 50 vehicle miles of the Project site and within 10% of the cost of the diesel-fueled-equivalent equipment. The Project applicant shall contact at least three contractors or vendors within Riverside County and submit to the City justification if the specified equipment is not commercially available.

MM-AQ-3 *is not quantified in the construction analysis as it is dependent on if the equipment is commercially available; however, additional emission reductions from implementation of* ***MM-AQ-3*** *are anticipated.*

MM-AQ-4 Limit Truck and Equipment Idling During Construction. The Project shall reduce idling time of heavy-duty trucks either by shutting them off when not in use or reducing the time of idling to no more than 3 minutes (thereby improving upon the 5-minute idling limit required by the state airborne toxics control measure 13 CCR 2485). The Project shall post clear signage reminding construction workers to limit idling of construction equipment.

MM-AQ-4 *is not quantified in the construction analysis.*

MM-AQ-5 Construction Dust Control Plan. Prior to the issuance of grading permits, the Project applicant or its designee shall develop and implement a Dust Control Plan to reduce Project-generated dust during construction and ensure compliance with the South Coast Air Quality Management District (SCAQMD) Rule 403. The Dust Control Plan shall include at a minimum the following control strategies:

a. Water or use another SCAQMD-approved dust control non-toxic agent shall be used on the grading areas at least three times daily.
b. A 15 mile per hour speed limit on unpaved surfaces shall be enforced.
c. All main roadways shall be constructed and paved as early as possible in the construction process.
d. Building pads shall be finalized as soon as possible following site preparation and grading activities.
e. Grading areas shall be stabilized as quickly as possible.
f. Chemical stabilizer shall be applied, a gravel pad shall be installed, or the last 100 feet of internal travel path within the construction site shall be paved prior to public road entry, as well as and for all haul roads.
g. Wheel washers shall be installed adjacent to the apron for tire inspection and washing prior to vehicle entry on public roads.

h. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or similar method within 30 minutes of occurrence.
i. Sufficient perimeter erosion control shall be provided to prevent washout of silty material onto public roads.
j. Unpaved construction site egress points shall be graveled to prevent track-out.
k. Construction access points shall be wet-washed at the end of the workday if any vehicle travel on unpaved surfaces has occurred.
l. Transported material in haul trucks shall be watered or treated.
m. All soil disturbance and travel on unpaved surfaces shall be suspended if winds (instantaneous gusts) exceed 25 miles per hour.
n. On-site stockpiles of excavated material shall be covered.
o. Haul truck staging areas shall be provided for loading and unloading of soil and materials and shall be located away from sensitive receptors at the farthest feasible distance.
p. Construction traffic control plans shall route delivery and haul trucks required during construction away from sensitive receptor locations and congested intersections to the extent feasible. Construction Traffic Control plans shall be finalized and approved prior to issuance of grading permits.

MM-AQ-5 *is quantified in the construction analysis within the mitigation module of CalEEMod, wherein water three times per day, water unpaved construction roads, and limit vehicle speeds on unpaved roads were selected.*

MM-AQ-6 Notification of Construction Activities. Prior to the commencement of any construction activities, the applicant or its designee shall provide evidence to the City of Moreno Valley that the applicant has employed a construction relations officer who will address community concerns regarding on-site construction activity. The applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer, who shall document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations along Cactus Avenue, Iris Avenue, Lasselle Street, and Oliver Street and noted on grading and improvement plans.

MM-AQ-6 *is not quantified in the construction analysis.*

MM-AQ-7 Use of Super-Compliant Low-VOC Paint During Construction. During construction, the Project shall use super-compliant low volatile organic compound (VOC) paint (less than 10 grams per liter VOC) for all interior and exterior paint applications for residential and non-residential land uses.

MM-AQ-7 *is quantified in the construction analysis within the mitigation module of CalEEMod, wherein 10 grams per liter VOC was selected for residential interior, residential exterior, non-residential interior, and non-residential exterior.*

MM-AQ-8 Low-VOC Cleaning Supplies and Paint Educational Program. Prior to the occupancy of any on-site development, the applicant or its designee shall provide evidence to the City of Moreno Valley that the applicant/phase developer has developed a Green Cleaning Product and Paint education program to be made available at rental and purchasing offices and/or on websites. The educational program shall include a flyer (hardcopy and/or digital) that includes, at a minimum,

an explanation of what volatile organic compounds (VOCs) are, how VOCs affect us, where to find low-VOC alternatives for cleaning supplies and paint, and additional resources for learning more.

MM-AQ-8 *is not quantified in the operational analysis.*

MM-AQ-9 Use Low-VOC Cleaning Supplies and Paint for Applicant and Homeowners Association Operated Spaces. Prior to the issuance of building permits, the applicant or its designee shall provide evidence to the City of Moreno Valley that for applicant (or its designee) and homeowners association operated spaces that provisions are in place to ensure only zero- or low-volatile organic compound (VOC) cleaning supplies and super compliant-VOC paints (less than 10 grams per liter VOC) are used during Project operation.

MM-AQ-9 *is not quantified in the operational analysis.*

MM-AQ-10 Use of Zero-Emission Landscape Equipment for Applicant-Operated and Homeowners Association Land. Only zero-emission landscaping equipment shall be used during project operation on land controlled by the applicant (or its designee) or a homeowners association. Gasoline-fueled landscaping equipment will be prohibited.

MM-AQ-10 *is not quantified in the operational analysis.*

MM-AQ-11 Landscape Maintenance Equipment Emission Reduction. The Project applicant shall implement the following landscape maintenance equipment reduction measures:

a. **Outdoor Electrical Outlets.** Prior to the issuance of building permits, the Project applicant or its designee shall provide evidence to the City of Moreno Valley that the design plans include electrical outlets on the exterior of the structure to facilitate use of electrical lawn and garden equipment.
b. **Encourage Utilization of Existing Yard Equipment Exchange and Rebate Programs.** The applicant (or its designee) or Project's future homeowners association shall educate future residents about the South Coast Air Quality Management District (SCAQMD) Electric Lawn Mower Rebate Program and the Commercial Electric Lawn and Garden Equipment Exchange Program. When conventional gasoline-powered yard equipment (e.g., lawn mowers, leaf blowers and vacuums, shredders, trimmers, and chain saw) are exchanged for electric and rechargeable battery-powered yard equipment, direct greenhouse gas (GHG) emissions from fossil-fuel combustion are displaced by indirect GHG emissions associated with the generation of electricity used to power the equipment.

MM-AQ-11 *is not quantified in the operational analysis.*

No additional operational mitigation measures have been identified as feasible at this time.

4.3.7 Significance of Impacts after Mitigation

Threshold 1: Air Quality Plan Consistency

Regarding construction criteria air pollutant emissions, the Project construction-source emissions would not exceed applicable SCAQMD regional thresholds after implementation of **MM-AQ-2** through **MM-AQ-7** and would thus would not conflict with SCAQMD Consistency Criterion No. 1 with incorporation of mitigation. The Project would result in operational criteria air pollutant emissions that would exceed the SCAQMD thresholds of significance after implementation of PDFs and all feasible mitigation measures (**MM AQ-7** through **MM-AQ-11**), which would still conflict with SCAQMD Consistency Criterion No. 1.

Implementation of **MM-AQ-1** would ensure that the appropriate residential and employment growth projections at the Project site would be incorporated into the next SCAG RTP/SCS (anticipated to be in 2024, but, based on timing, may be the 2028 RTP/SCS) and would thereby be incorporated into the following SCAQMD AQMP. As the SCAG is in process of preparing their 2024 RTP/SCS and the SCAQMD has not identified the next target year for updating the AQMP, there is an anticipated interim period where the SCAG RTP/SCS growth projections and the SCAQMD AQMP do not reflect the appropriate residential and employment growth at the Project site; however, this will eventually be resolved with updates of both plans. Nonetheless, the Project would still conflict with SCAQMD Consistency Criterion No. 2.

Based on the above considerations, the Project's potential to conflict with or obstruct implementation of the applicable air quality plan would be **significant and unavoidable**.

Threshold 2: Potential to Result in a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant

Construction

Construction-related impacts associated with the potential to cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment would be **less than significant with mitigation**, as **MM-AQ-2** through **MM-AQ-7** would reduce Project-generated construction the criteria air pollutant emissions below the SCAQMD construction thresholds.

Operation

With implementation of **MM-AQ-8** through **MM-AQ-11**, operation of the Project would continue to exceed the criteria air pollutant operational thresholds established by the SCAQMD for emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$, resulting in a **significant and unavoidable** impact related to the potential to result in a cumulatively considerable net increase in any nonattainment criteria air pollutant.

Threshold 3: Exposure of Sensitive Receptors

Localized Significance Thresholds

Construction of the Project would result in a **less than significant impact with mitigation**, as implementation of **MM-AQ-2** through **MM-AQ-7** would reduce localized criteria air pollutant emissions below the applicable SCAQMD LSTs.

Carbon Monoxide Hotspots

Operation of the Project would result in a **less than significant** CO hotspot impact prior to mitigation.

Health Risk Assessment

The HRA results after incorporation of **MM-AQ-2** show that the Residential Maximum Individual Cancer Risk residential off site, Maximum Individual Cancer Risk residential on site, and Maximum Individual Cancer Risk other non-residential sensitive receptor (Vista del Lago High School) off site would be reduced below thresholds. The Project construction TAC health risk impacts would be **less than significant with mitigation**.

Potential operational health risk would result in a **less than significant** impact without mitigation.

Potential cumulative health risk would be **less than significant with mitigation** (specifically **MM-AQ-2**).

Valley Fever

Impacts associated with valley fever exposure for sensitive receptors would be **less than significant** without mitigation.

Threshold 4: Other Emissions (Odors)

The Project would result in **less than significant** impacts to other emissions, specifically odors, without mitigation.

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4.4 Biological Resources

This section describes the existing biological resource conditions of the Aquabella Specific Plan Amendment Project (Project) site, identifies relevant regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in potentially significant impacts related to biological resources that would be reduced to less than significant after mitigation (City of Moreno Valley 1999b, 2003, 2005b).

The following analysis of the Project's potential impacts related to biological resources is based on the biological assessment contained in Appendix E.

4.4.1 Existing Environmental Conditions

General Site Description

The Project site is generally flat with elevations ranging from 1,490 feet to 1,560 feet above mean sea level. The site has experienced substantial disturbance from historical agricultural activities and previous grading that has occurred off and on across the entire site over the past two decades. In several areas, shallow basins have formed as a result of the initial grading of the site, particularly in association with grading and contouring for a planned artificial lake feature and on flat graded pads that are found across the site where soil compaction allowed for shallow depressions to occur, some of which fill with water during rain events. Although no historical grading has occurred within Planning Area 1 in the northwestern portion of the site just north of Cactus Avenue, this area has been historically subjected to extensive agricultural practices and other disturbances. Currently, this portion of the site is fallow, and existing non-native grasses and weeds in this area are mowed on a regular basis for fire fuel reduction purposes given the proximity of residential and commercial areas adjacent to the site.

Currently, approximately 70% of the Project site is characterized as highly disturbed due to historical agricultural operations and as a result of the initial grading of much of the site associated with earlier project approvals, particularly with contouring for a planned artificial lake feature. A total of 24% of the site is dominated by non-native grasses that have established following past agriculture and grading activities. As a result of the high level of historical disturbances, the Project site does not support the original natural landscape or soil surfaces that occurred prior to disturbance. As shown in Table 4.4-1, only approximately 6% of the site supports areas of native vegetation, most of which is within a riparian revegetation area extending along the Line F channel along the southern edge of the existing Riverside County flood control channel (Figure 4.4-1). This channel was established as a riparian restoration site to mitigate impacts to existing aquatic features under California Department of Fish and Wildlife (CDFW) and/or federal U.S. Army Corps of Engineers (USACE) jurisdiction associated with earlier project approvals in the early 2000s. A total of 11.9 acres of riparian vegetation was planted along this channel to satisfy CDFW/USACE mitigation requirements. In addition to serving as mitigation for impacts to aquatic resources, the Line F riparian mitigation channel was also intended to serve a number of resource-related purposes, including providing for short-term flood water retention and water flow energy dissipation; providing long-term storage of urban stormwater runoff; improving nutrient cycling and retention of soil particulates; and serving as important

wildlife habitat for a number of common and sensitive wildlife species. The Line F riparian mitigation channel will be preserved in perpetuity.

The Project site is located within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and the Stephens' Kangaroo Rat Habitat Conservation Plan (HCP) Fee Area.

Soils, Vegetation Communities, and Land Cover Types

In December 2022, Dudek biologists conducted a biological assessment of the Project site to characterize and map on-site vegetation communities and to identify on-site soil types. Vegetation communities within the Project site were mapped according to A Manual of California Vegetation, Online Edition (CNPS 2022a), and the California Natural Community List (CDFW 2022a). Some modifications, such as the Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986; Oberbauer et al. 2008) and the Habitat Classification System (Gray and Bramlet 1992), were incorporated to accommodate the lack of conformity of the observed communities to those provided in these references.

The predominant soil types within the site are Ramona and Greenfield sandy loams (USDA 2023a). None of the soils within the site have a hydric rating (USDA 2023a). Approximately 70% of the site is characterized as disturbed as a result of previous agriculture practices and grading/contouring activities, while nearly 80% of the remaining undisturbed area on the site is comprised of non-native grassland. As shown in Table 4.4-1, only 6.2% of the site supports areas of native vegetation, most of which is within the riparian revegetation area extending along the southern edge (Line F) of the existing Riverside County flood control channel; this revegetation area was established and preserved as mitigation associated with previously acquired state and federal wetland permits for the previous project approvals.

Table 4.4-1 summarizes the vegetation communities and land cover types and associated acreages mapped on the Project site according to the natural communities and land cover types described within the MSHCP Vegetation Community Classifications. Figure 4.4-1 depicts the location of each vegetation community and land cover type mapped within the Project site.

Table 4.4-1. Vegetation Communities and Land Covers within the Project Site

Vegetation Community/Land Cover	Acres
Disturbed/Unvegetated	470.4
Grass/Herb	
Non-native grassland	159.4
California aster association	1.3
Common cocklebur association	0.4
Scrub	
Brittlebush association	9.7
Big saltbush association	0.9
Riparian	
*Cottonwood–red willow/arroyo willow–mulefat association	11.8
Mulefat association	8.7
*Black willow/mulefat association	7.0
Mulefat–tamarix association	2.2

Table 4.4-1. Vegetation Communities and Land Covers within the Project Site

Vegetation Community/Land Cover	Acres
Tamarix association	1.4
Total	**673.2**

Note:
* Communities listed by the California Department of Fish and Wildlife as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (CDFW 2022a).

Disturbed/Unvegetated

Disturbed and unvegetated land covers 470.4 acres of the Project site, which amounts to approximately 70% of the overall site. The disturbed areas are generally the result of extensive historical agricultural activities and previous grading and contouring that has occurred off and on across the entire site over the past two decades, particularly in association with excavation for a planned artificial lake feature. Most of the disturbed area on the site is characterized by bare earth sparsely populated by ruderal/weedy grasses and herbs. Although no historical grading has occurred within Planning Area 1 in the northwestern portion of the site just north of Cactus Avenue, this area has been historically subjected to extensive agricultural practices and other disturbances; existing non-native grasses and weeds in this area, as well as on other portions of the site, are mowed on a regular basis for fire fuel reduction purposes given the proximity of residential and commercial areas adjacent to the Project site. A Riverside County flood control channel bisects the property in the southeastern portion of the site.

Grass/Herb

Areas of the site consisting of grasses and herbs comprise a total of 161.1 acres (23.9%) of the Project site. Non-native grassland, composed of a variety of non-native grasses, encompasses almost 99% of this area primarily in the northwestern, northeastern, and southeastern portions of the site. A pocket (1.3 acres) of California aster (*Corethrogyne filaginifolia*) occurs in the central portion of the site and a small area (0.4 acres) of common cocklebur (*Xanthium strumarium*) occurs in the southern portion of the site. Both species are very common and commonly occur in disturbed areas.

Scrub

The two species associated with the scrub category include big saltbush (A*triplex lentiformis*), totaling 0.9 acres in the far eastern portion of the site, and brittlebush (*Encelia farinose*), which comprises 9.7 acres primarily in the central portion of the site.

Riparian

Vegetation communities that are considered riparian in nature consist of five associations totaling 31.1 acres on the Project site: cottonwood–red willow/arroyo willow/mulefat association (11.8 acres), mulefat association (8.7 acres), black willow/mulefat association (7.0 acres), mulefat–tamarix association (2.2 acres), and tamarix association (1.4 acres). The mulefat association is primarily associated with the previously excavated area in the central portion of the Project site that at one point was contoured as part of a planned human-made lake feature. The mulefat–tamarix association and tamarix association communities are generally found in isolated and small pockets in both the central and southern portions of the site. The cottonwood–red willow/arroyo willow/mulefat association and the black willow/mulefat association communities are located entirely within the Line F riparian

mitigation channel along the southern edge of the Riverside County flood control channel in the southern portion of the Project site.

Plant and Wildlife Diversity

A total of 81 species of plants were observed during the 2022 and 2023 field surveys conducted within the Project site (Biological Technical Report, Appendix E to this Subsequent EIR). Latin and common names for plant species with a California Rare Plant Rank (CRPR) follow the California Native Plant Society's Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2022b). For plant species without a CRPR ranking, Latin names follow the Jepson Online Interchange for California Floristics (Jepson Flora Project 2023), and common names follow the California Natural Community List (CDFW 2022a) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants database (USDA 2023b). There are 17 plant families represented on site, with more than half of the species coming from the *Asteraceae*, *Poaceae*, and *Fabaceae* families associated with the on-site grassland community.

Although most of the site is quite disturbed, the upland and riparian communities within the Project site provide some foraging, breeding, and shelter habitat for a number of amphibian, reptile, bird, mammal, and invertebrate species. A list of the wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign is included in the Biological Technical Report (Appendix E). Latin and common names of animals follow Crother (2012) for reptiles and amphibians, the American Ornithological Society (AOS 2023) for birds, Wilson and Reeder (2005) for mammals, and the North American Butterfly Association (NABA 2016) or San Diego Natural History Museum (SDNHM 2002) for butterflies.

Sensitive Biological Resources

During the December 2022 site assessment discussed above, the potential for the site to support plant and/or wildlife species, vegetation communities, and other natural resources considered to be sensitive or otherwise of special status by state and/or federal resource agencies was assessed. Prior to conducting the site visit, Dudek's biologists queried local, state, and federal agency databases to identify those species known to occur in the Project site region. These database searches included the most recent versions of the California Natural Diversity Database (CNDDB) (CDFW 2022a), the California Native Plant Society's Inventory of Rare and Endangered Plants (CNPS 2022b), the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (USFWS 2022), and the Riverside Conservation Authority MSHCP Information Map (RCA 2003). Based on the review of these databases and documents, a target list of special-status plant and animal species known to occur in the Project region that could potentially occur on the site was then developed.

The potential for target special-status plant and wildlife species to occur within the Project site was primarily evaluated based on the extent and overall quality of on-site vegetation communities and the potential of these communities to serve as suitable habitat for the target species (i.e., whether or not on-site potential habitat is fragmented, disturbed, intact, or large enough to support populations of the target species). Dudek also conducted an assessment for the presence of waters or wetlands potentially subject to state and/or federal regulatory agency jurisdiction. However, a formal wetland delineation was not conducted as part of the site visit. In addition, an assessment of the potential for the site to serve as an important wildlife movement corridor was evaluated based on a characterization of on-site resources and the juxtaposition of the site to larger regional open space areas or known habitat linkages in the region.

Special-Status Plant Species

Special-status plant species include those species that are federally and/or state-listed as endangered or threatened or that are proposed for listing as endangered or threatened; are candidate species for state or federal listing; or are listed as a List 1A or 1B, List 2A or 2B, List 3, or List 4 plants in the Inventory of Rare and Endangered Vascular Plants of California (CNPS 2022a). Plants with a CRPR of 1A are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years. Plants with a CRPR of 1B are rare throughout their range with the majority of them endemic to California. Plants with a CRPR of 2A are presumed extirpated because they have not been observed or documented in California for many years. List 3 species are those for which more information is needed regarding rarity and/or threats. List 4 species are those considered uncommon but not necessarily "rare" from a statewide perspective; this is a watch list.

Based on an assessment of the vegetation communities, topography, and soils and particularly due to the highly disturbed nature of the site due to previous agricultural practices and grading activities, the predominance of non-native grassland on the site, and the general lack of native habitat communities on the site, none of the non-listed special-status plant species reported in the CNDDB, USFWS, and California Native Plant Society databases as occurring within the vicinity of the Project site were determined to have a potential to occur on the Project site. There are three listed special-status plant species—San Jacinto valley crownscale (*Atriplex coronata* var. *notatior*) (federally endangered), thread-leaved brodiaea (*Brodiaea filifolia*) (state endangered, federally threatened), and spreading navarretia (*Navarretia fossalis*)—that were determined to have a low potential to occur within the Project site; however, the Project is not within a Criteria Area Species Survey Area (CASSA) or Narrow Endemic Plant Species Survey Area (NEPSSA), and therefore these species are considered fully covered by the MSHCP following payment of the Local Development Mitigation Fee. In addition, none of these three species or any other special-status plant species have ever been recorded on the site during previous surveys conducted in association with earlier California Environmental Quality Act (CEQA) review processes. As such, no further analyses are required for special-status plant species.

Sensitive Vegetation Communities

There are two vegetation communities listed by CDFW as high priority for inventory (CDFW 2022a) occurring on the Project site: the cottonwood–red willow/arroyo willow/mulefat association and the black willow/mulefat association. Therefore, these two communities are considered sensitive pursuant to CEQA. However, these communities are primarily located within the Line F riparian mitigation channel along the southern edge of the Riverside County flood control channel in the southern portion of the Project site (Figure 4.4-1). As previously noted, this mitigation area will be preserved in perpetuity.

Special-Status Wildlife Species

Special-status wildlife species include those species that are federally and/or state-listed as endangered or threatened or that are proposed for listing or considered candidate for listing as endangered or threatened; designated as Species of Special Concern by CDFW; listed on the CDFW "Special Animals" list; and/or meet the definition of rare, threatened, or endangered as described in the CEQA Guidelines, Section 15380.

As noted in Table 4.4-1 above, a very large portion of the site (approximately 70%) is in a highly disturbed condition from previous agriculture, grading, and contouring activities and existing development and is essentially surrounded by existing residential and commercial development. The remainder of the site is dominated by non-native grassland. These conditions serve to limit the potential of most special-status species documented in the region to

occur on the Project site. Based on an assessment of the on-site vegetation communities, soils, and other resource characteristics of the Project site, a total of 16 special-status wildlife species reported in the CNDDB and USFWS databases as occurring within the vicinity of the Project site were determined to have some potential (albeit low) to nest/breed or otherwise occur on the Project site in its current condition (Table 4.4-2).

Of the 16 species listed in Table 4.4-2, 14 are considered "covered species" under the MSHCP (i.e., potential impacts or "take" of these species are addressed and mitigated for by various provisions in the MSHCP). For nine of these covered species, no additional surveys or analysis is required. Five of these species, burrowing owl (*Athene cunicularia*), least Bell's vireo (*Vireo bellii pusillus*), Riverside fairy shrimp (*Streptocephalus woottoni*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), and vernal pool fairy shrimp (*Branchinecta lynchi*), though covered by the MSHCP, are subject to additional surveys pursuant to Sections 6.1.2 and 6.3.2 of the MSHCP if suitable habitat for these species occur (RCTLMA 2003). Because the Project site supports suitable habitat for these five species, focused surveys for these species were conducted in the spring/summer of 2023, the methods and results of which are addressed in the Biological Technical Report (Appendix E). The remaining two species, long-eared owl (*Asio otus*) and Crotch's bumble bee (*Bombus crotchii*), are not listed as covered species under the MSHCP. Because long-eared owl has a low potential to occur and was not observed during 2023 surveys, no further species-specific surveys were conducted. Because Crotch's bumble bee is a State Candidate for listing as a Threatened species, protocol surveys for this species were conducted in 2023, the methods and results of which are addressed in the Biological Technical Report (Appendix E).

The Project site is also within the Stephens' Kangaroo Rat HCP Fee Area, which requires project applicants to pay a mitigation fee to the City of Moreno Valley (City) to ensure full take coverage in the event any Stephens' kangaroo rats (*Dipodomys stephensi*) occur on a given project site. This fee was paid in full to the City in 2006 prior to the initial grading of the Project site.

Table 4.4-2. Special-Status Wildlife Species with Some Potential to Occur within the Project Site

Common Name	Scientific Name	Status (Federal/State)	Western Riverside MSHCP	Habitat	Potential to Occur
Amphibians					
Western spadefoot	*Spea hammondii*	None/SSC	Covered[1]	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Low potential to occur.** The Project site contains grassland and ephemeral pool habitat. However, much of the on-site habitat is disturbed and the site is essentially surrounded by urban development, limiting access to the site by this species. The nearest mapped CNDDB occurrence is 3 miles east of the Project site, where one adult was observed in 2012 along Davis Road (CDFW 2022a).
Birds					
Long-eared owl (nesting)	*Asio otus*	BBC/SSC	No	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	**Low potential to occur. Not observed during 2023 surveys.** The Project site contains some suitable riparian habitat for nesting (within the mitigation area) and nearby open habitat for foraging. However, much of the on-site habitat proposed for development is disturbed and does not contain dense stands of trees, and the site is essentially surrounded by urban development. There are several records of this species near Lake Perris State Recreation Area, approximately 2 miles south of the Project site (CDFW 2022b). The nearest mapped CNDDB records of this species occur approximately 10 miles southwest of the Project site near the Harford Springs Reserve (CDFW 2022a).

Table 4.4-2. Special-Status Wildlife Species with Some Potential to Occur within the Project Site

Common Name	Scientific Name	Status (Federal/State)	Western Riverside MSHCP	Habitat	Potential to Occur
Burrowing owl (nesting and shelter burrow sites)	*Athene cunicularia*	BCC/SSC	Covered[2]	Nests and forages in grassland, open scrub, and agriculture habitat areas, particularly with ground squirrel burrows; Project site is located within the MSHCP burrowing owl survey area	**Previously observed. Not observed during 2023 surveys.** Several owls were observed during surveys associated with the 1999 EIR. The Project site contains some small mammal burrows and burrow surrogates with potential for burrowing owl use. However, soils within the Project site are generally compacted and not as friable as a result of grading since the time of the 1999 EIR, thus limiting the potential of this species to occur in most areas. There are several mapped CNDDB occurrences of this species less than 5 miles from the Project site (CDFW 2022a). Pursuant to Section 6.3.2 of the MSHCP, focused protocol surveys were conducted for this species in the spring/summer of 2023 (see Appendix E, Biological Technical Report). No burrowing owls were observed.
Northern harrier	*Circus hudsonius*	BCC/SSC	Covered[1]	Typically nest within wetland (marsh) vegetation and forages in these and adjacent upland grasslands and some agricultural areas	**Previously observed.** This species was observed foraging over the site during surveys associated with the 1999 EIR. Due to increased disturbance since that time, this species not expected to nest on site but could occasionally forage over the site in its current condition.
California horned lark	*Eremophila alpestris actia*	—/WL	Covered[1]	Nests and forages in grasslands, agricultural areas, mesas, scrub	**Previously observed.** This species was observed foraging during surveys associated with the 1999 EIR; no nesting observed. Though the site is

Table 4.4-2. Special-Status Wildlife Species with Some Potential to Occur within the Project Site

Common Name	Scientific Name	Status (Federal/State)	Western Riverside MSHCP	Habitat	Potential to Occur
					much more disturbed than at the time of the previous survey, the species could potentially nest within available grassland and scrub habitat.
White-tailed kite	*Elanus leucurus*	—/FP	Covered[1]	Prefers to nest in riparian woodlands and forage in adjacent grassland and open scrub habitats	**Previously observed.** This species was observed foraging and roosting during surveys associated with the 1999 EIR; no nesting observed. Though the site is much more disturbed than at the time of the previous survey, the species could potentially nest within the preserved riparian woodland area along the Riverside County flood control channel. No nesting observed during 2023 least Bell's vireo surveys conducted in this area.
Loggerhead shrike	*Lanius ludovicianus*	—/SSC	Covered[1]	Nests and forages in grasslands, agricultural areas, chaparral, scrub	**Previously observed.** This species was observed foraging during surveys associated with the 1999 EIR; no nesting observed. Though the site is much more disturbed than at the time of the previous survey, the species could potentially nest within available grassland and scrub habitat.
Least Bell's vireo (nesting)	*Vireo bellii pusillus*	FE/SE	Covered[2]	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Observed in 2023.** The Project site contains riparian habitat that is suitable for nesting and foraging in the southern portion of the Project site. Additionally, the species has been reported foraging within this riparian habitat. There are several CNDDB records within 5 miles of the Project site (CDFW 2022a). Pursuant to

Table 4.4-2. Special-Status Wildlife Species with Some Potential to Occur within the Project Site

Common Name	Scientific Name	Status (Federal/State)	Western Riverside MSHCP	Habitat	Potential to Occur
					Section 6.1.2 of the MSHCP, focused protocol surveys for this species were conducted in summer 2023, during which several individuals of this species were observed (see Appendix E, Biological Technical Report).
Invertebrates					
Crotch's bumble bee	*Bombus crotchii*	None/SCT	No	Open grassland and scrub communities supporting suitable floral resources	**Low potential to occur. Not observed during 2023 surveys.** While the Project site contains some grassland habitat that contains floral components that could support this species, the soils on the site are relatively compacted and generally lack large numbers of rodent burrows, as well as bunch grass, in which the species typically nests, The nearest known occurrence of this species is approximately 4.5 miles east of the Project site from 2020 (CDFW 2022a). Focused protocol surveys for this species were conducted in summer 2023. No Crotch's bumble bees were observed (see Appendix E, Biological Technical Report).
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT/None	Covered[2]	Vernal pools, seasonally ponded areas, and ephemeral freshwater habitats	**Low potential to occur. Not observed during 2023 surveys.** The Project site contains a number of areas where water pools during rain events that provide potentially suitable habitat for this species. However, much of the on-site habitat is disturbed and the site is essentially surrounded by urban development. The nearest known

Table 4.4-2. Special-Status Wildlife Species with Some Potential to Occur within the Project Site

Common Name	Scientific Name	Status (Federal/State)	Western Riverside MSHCP	Habitat	Potential to Occur
					occurrence of this species is approximately 14 miles southeast of the Project site from 2005 (CDFW 2022a). Pursuant to Section 6.1.2 of the MSHCP, focused protocol surveys were conducted for this species in summer 2023. No vernal pool fairy shrimp were observed (see Appendix E, Biological Technical Report).
Riverside fairy shrimp	*Streptocephalus woottoni*	FE/None	Covered[2]	Vernal pools, seasonally ponded areas, and ephemeral freshwater habitats	**Low potential to occur. Not observed during 2023 surveys.** The Project site contains a number of areas where water pools during rain events that provide suitable habitat for this species. However, much of the on-site habitat is disturbed and the site is essentially surrounded by urban development. There are two CNDDB mapped occurrences west and southwest of the Project site within March Air Force Base; the nearest of these two occurrences is just over 3 miles west of the Project site from 1997 (CDFW 2022a). Pursuant to Section 6.1.2 of the MSHCP, focused protocol surveys were conducted for this species in summer 2023. No Riverside fairy shrimp were observed (see Appendix E, Biological Technical Report).
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE/None	Covered[2]	Vernal pools, seasonally ponded areas, and	**Low potential to occur. Not observed during 2023 surveys.** The Project site contains a number of areas where

Table 4.4-2. Special-Status Wildlife Species with Some Potential to Occur within the Project Site

Common Name	Scientific Name	Status (Federal/State)	Western Riverside MSHCP	Habitat	Potential to Occur
				ephemeral freshwater habitats	water pools during rain events that provide suitable habitat for this species. However, much of the on-site habitat is disturbed and the site is essentially surrounded by urban development. The nearest known occurrence of this species is approximately 18 miles from the Project site (CDFW 2022a). Pursuant to Section 6.1.2 of the MSHCP, focused protocol surveys were conducted for this species in summer 2023. No San Diego fairy shrimp were observed (see Appendix E, Biological Technical Report).
Mammals					
Northwestern San Diego pocket mouse	*Chaetodipus fallax*	None/SSC	Covered[1]	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	**Low potential to occur.** The Project site contains some annual grassland habitat; however, soils are generally compacted from previous grading activities and the site is essentially surrounded by urban development. There are several CNDDB records less than 5 miles from the Project site (CDFW 2022a).
Stephens' kangaroo rat	*Dipodomys stephensi*	FE/ST	Covered[1]	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover	**Low potential to occur. Not observed during previous CEQA approval surveys.** The site contains some grassland habitat and sparsely vegetated areas often utilized by this species; however, the site is essentially surrounded by urban development, which may limit the ability of the

Table 4.4-2. Special-Status Wildlife Species with Some Potential to Occur within the Project Site

Common Name	Scientific Name	Status (Federal/State)	Western Riverside MSHCP	Habitat	Potential to Occur
					species to access the site from known regional populations. The nearest mapped CNDDB occurrence is approximately 0.5 miles south of the Project site. Additionally, there are several other CNDDB occurrences less than 5 miles from the Project site (CDFW 2022a).
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	None/SSC	Covered[1]	Lower-elevation and sparsely vegetated grassland, alluvial sage scrub, and coastal scrub with patches of fine sandy soils associated with washes or windblown areas such as dunes	**Not expected to occur.** While the Project site contains some grassland habitat, the highly disturbed and compacted nature of on-site soils due to past grading activities has resulted in little or no areas of fine sandy soils within wash features. The nearest recorded occurrence is approximately 1 mile southwest of the site documented in 1990 (CDFW 2022a).
Reptiles					
San Diegan tiger whiptail	*Aspidoscelis tigris stejnegeri*	None/SSC	Covered[1]	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas	**Moderate potential to occur.** The Project site contains suitable open and dry habitat, as well as some riparian habitat (primarily the mitigation area). The nearest known occurrence is approximately 4.9 miles west of the Project site, at the March Air Force Base (CDFW 2022a).

Notes:

1 Take coverage provided under the MSHCP such that no additional surveys or actions are required.

2 Although covered under the MSHCP, focused surveys are required per Section 6.3.2 of the MSHCP.

Status Legend

Federal

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
FE: Federally Endangered
FT: Federally Threatened

State

FP: Fully Protected
SSC: Species of Special Concern
SCT: State Candidate for listing as Threatened
SE: State Endangered
ST: State Threatened
WL: Watch List species

Western Riverside MSHCP: Western Riverside County Multiple Species Habitat Conservation Plan

4.4.2 Regulatory Framework

Federal

Endangered Species Act

The federal Endangered Species Act (FESA) prohibits the taking, possession, sale, or transport of endangered species. "Take" is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 USC 1532[19]). Pursuant to the requirements of FESA, a federal agency reviewing a project within its jurisdiction must determine whether any federally listed threatened or endangered wildlife species could be present in the project site and determine the extent to which the project will have an effect on such species. In addition, federal agencies are required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA, or if it would result in the destruction or adverse modification of critical habitat designated for such species (16 USC 1536[3]–[4]). Projects that would result in take of any federally listed threatened or endangered wildlife species are required to obtain authorization from the National Marine Fisheries Service and/or USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the project.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) regulates or prohibits taking, killing, possession of, or harm to migratory bird species listed in Title 50, Section 10.13 of the Code of Federal Regulations. The MBTA is an international treaty for the conservation and management of bird species that migrate through more than one country, and is enforced in the United States by USFWS. Hunting of specific migratory game birds is permitted under the regulations listed in Title 50, Section 20 of the Code of Federal Regulations. The MBTA was amended in 1972 to include protection for migratory birds of prey (raptors). In late December 2017, the Department of Interior issued an opinion that interprets the above prohibitions as only applying to direct and purposeful actions the intent of which is to kill, take, or harm migratory birds; their eggs; or their active nests. Incidental take of birds, eggs, or nests that are not the purpose of such an action, even if there are direct and foreseeable results, are not prohibited under this opinion. On February 3, 2022, the USFWS issued a proposed rule in the Federal Register to codify this approach to defining the scope of the MBTA.

Clean Water Act Section 404

The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Under Section 404 of the CWA, USACE has the authority to regulate activities that could discharge fill or dredge material or otherwise adversely modify wetlands or other waters of the United States. USACE implements the federal policy embodied in Executive Order 11990, which, when implemented, is intended to result in no net loss of wetland values or function.

Clean Water Act Section 401

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Act, California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the

state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine regional boards. The Central Valley Regional Water Quality Control Board has authority for Section 401 compliance in the Project area. A request for certification is submitted to the regional board at the same time that an application is filed with USACE.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Fish and Game Commission has the responsibility of maintaining a list of threatened and endangered species. CESA, pursuant to California Fish and Game Code Section 2080, prohibits the take of state-listed threatened or endangered animals and plants unless otherwise permitted pursuant to CESA. Take under CESA is defined as any of the following: "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code Section 86). Unlike the FESA, CESA does not include harassment or harm (e.g., habitat degradation) in its definition of take. Species determined by the State of California to be candidates for listing as threatened or endangered are treated as if listed as threatened or endangered and are, therefore, protected from being taken. Pursuant to CESA, a state agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species, or candidate species, could be potentially impacted by that project.

CESA generally prohibits the taking of state listed endangered or threatened fish, wildlife, and plant species; however, for projects resulting in impacts to state listed species, the CDFW may authorize a take through issuance of an Incidental Take Permit pursuant to Section 2081 of the California Fish and Game Code. Section 2081 requires preparation of mitigation plans in accordance with published guidelines that require, among other things, measures to fully mitigate impacts to state listed species. The CDFW exercises authority over mitigation projects involving state listed species, including those resulting from CEQA mitigation requirements.

Fish and Game Code Section 1600 – Lake and Streambed Alteration Agreement

Under Sections 1600–1616 of the California Fish and Game Code, the CDFW regulates activities that would alter the flow, bed, channel, or bank of streams and lakes. The limits of CDFW's jurisdiction are defined in the Code as the "bed, channel or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit" (Section 1601). In practice, the CDFW usually marks its jurisdictional limit at the top of the stream or bank, or at the outer edge of the riparian vegetation, whichever is wider.

Fish and Game Code Section 1940 – Sensitive Natural Communities

Section 1940 of the California Fish and Game Code requires CDFW to develop and maintain a vegetation mapping standard for the state. More than half of the vegetation communities in the state have been mapped through the Vegetation Classification and Mapping Program.

Natural vegetation communities are evaluated by CDFW and are assigned global (G) and state (S) ranks based on rarity of and threats to these vegetation communities in California. Natural communities with ranks of S1–S3 are considered sensitive natural communities to be addressed in the environmental review processes of CEQA and its equivalents. Sensitive natural communities are defined by CDFW as vegetation alliances with state ranks of S1–S3 (S1: critically imperiled; S2: imperiled; S3: vulnerable), as identified in the List of Vegetation Alliances and

Associations (CDFW 2022a) and subsequent updates. Additionally, all vegetation associations within the alliances with ranks of S1–S3 are considered sensitive habitats. CEQA requires that impacts to sensitive natural communities be evaluated and mitigated to the extent feasible.

Sensitive natural communities are communities that have a limited distribution and are often vulnerable to the environmental effects of projects. These communities may or may not contain special-status species or their habitats. For purposes of this assessment, sensitive natural communities are considered to include vegetation communities listed in CDFW's CNDDB and communities listed in the Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

Fully Protected Species

The classification of Fully Protected was an effort by the California Legislature in the 1960s to identify and provide additional protection to those animals that were rare or faced possible extinction. Protection of Fully Protected Species is described in four sections of the California Fish and Game Code (Sections 3511, 4700, 5050, and 5515). These statutes prohibit the take or possession of Fully Protected Species at any time. The CDFW is unable to authorize incidental take of Fully Protected Species when activities are proposed in areas inhabited by these species, except pursuant to an approved Natural Community Conservation Plan. Most Fully Protected Species have also been listed as threatened or endangered species under state endangered species laws and regulations. Permits may be issued for the take of Fully Protected bird species for necessary scientific research and relocation of the species for the protection of livestock (as per California Fish and Game Code Section 3511[a][1]).

California Fish and Game Code Sections 3503, 3503.5, 3513

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

Regional

Stephens' Kangaroo Rat Habitat Conservation Plan

The Stephens' Kangaroo Rat HCP describes the proposed conservation, mitigation, and monitoring measures to be implemented for the preservation of the federally endangered Stephens' kangaroo rat. The Stephens' Kangaroo Rat HCP establishes a regional system of Core Reserves throughout western Riverside County for the specific conservation of Stephens' kangaroo rat and the ecosystem upon which it depends. A standard fee, known as the Development Mitigation Fee, is charged to development projects within the Stephens' Kangaroo Rat HCP coverage area to supplement the financing of reserve management for the Stephens' Kangaroo Rat HCP (RCHCA 1996).

The Project site is outside of the Stephens' Kangaroo Rat HCP Core Reserve Area but is within the Stephens' Kangaroo Rat HCP Fee Area. Therefore, the Project has take coverage for any Stephens' kangaroo rat potentially occurring on the site (though take is not expected to occur due to the general lack of suitable habitat). Projects within the MSHCP are required to pay the standard Stephens' Kangaroo Rat HCP Development Mitigation Fee, regardless of whether Stephens' kangaroo rat occurs on a given site or not. This fee was paid in full to the City in 2006 prior to the initial grading of the Project site.

Western Riverside County Multiple Species Habitat Conservation Plan

Approved in June 2003 by the County of Riverside, the MSHCP is a comprehensive, multijurisdictional plan that conserves federally listed endangered and threatened plant and animal species and associated habitats encompassing approximately 1.26 million acres (approximately 2,000 square miles) in western Riverside County (RCTLMA 2003). The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of FESA, as well as a Natural Communities Conservation Plan under the state Natural Communities Conservation Planning Act of 2001. The MSHCP allows the participating public jurisdictions ("Permittees") to authorize the take of plant and wildlife species identified within the MSHCP Plan Area. For projects within the MSHCP Plan Area, USFWS and CDFW will grant "take authorization" for 146 threatened, endangered, and other special-status plant and wildlife species for otherwise lawful actions, such as public and private development projects, that may incidentally take or harm individual species or their habitat outside of areas proposed for conservation within the MSHCP Plan Area, in exchange for the assembly and management of a coordinated MSHCP "Conservation Reserve." The MSHCP is implemented by the Permittees and the Riverside Conservation Authority, with permit compliance ensured by USFWS and CDFW. The jurisdictions and other local and state public entities that signed onto the MSHCP are effectively referred to as "Permittees." The City is an MSHCP Permittee.

The entire Project site is within the MSHCP Plan Area, but is not within a "Criteria Cell" (i.e., areas identified as being needed for conservation in assembling the MSHCP Conservation Reserve) identified by the MSHCP. Future development of the Project site must comply with all relevant measures of the MSHCP as presented in Volume I, Chapter 6.0 (RCTLMA 2003); those that apply or potentially apply to the Project site are outlined below.

MSHCP: Riparian/Riverine and Vernal Pools Guidelines (Section 6.1.2)

Any future development within the MSHCP Plan Area is required to demonstrate consistency with measures that address conservation of the following MSHCP Section 6.1.2 sensitive biological resources: (1) riparian/riverine resources; (2) vernal pools; (3) fairy shrimp, including Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and vernal pool fairy shrimp; and (4) riparian birds, including least Bell's vireo, southwestern willow flycatcher (*Empidonax traillii extimus*), and yellow-billed cuckoo (*Coccyzus americanus*) (RCTLMA 2003).

Riparian/riverine areas are habitats dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens that occur close to, or that depend upon soil moisture from, a nearby freshwater source. Riparian/riverine resources also include areas with freshwater flow during all or a portion of the year.

Vernal pools are seasonal wetlands that occur in topographic depression areas and that include all three wetland parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season, but normally lack the hydrology and/or vegetation indicators during the drier portion of the growing season. If seasonal pools occur on a site proposed for development, these pools need to be assessed to determine if they are considered vernal or not. Due to the substantial rain events that occurred during the winter and early spring months in 2023, a number of seasonal pools formed on the Project site and were evaluated as to whether they were vernal in nature. The methods and results of this assessment are discussed in the Biological Technical Report (Appendix E).

Pursuant to Section 6.1.2 of the MSHCP, if suitable habitat occurs on a given site for certain state- or federally listed threatened or endangered species and the proposed project design does not incorporate avoidance measures for the identified species habitat, focused surveys for those species shall be conducted. The seasonal pools that formed due to the substantial rain events in early 2023 represented potentially suitable habitat (albeit of low value,

given the disturbed nature of the site) for three state- and federally listed threatened/endangered fairy shrimp species known to occur in the Project region. As such, protocol-level surveys were conducted for these species, the methods and results of which are discussed in the Biological Technical Report (Appendix E). The restored riparian habitat adjacent to the Riverside County flood control channel in the southern portion of the site also contains suitable habitat for the state- and federally listed endangered least Bell's vireo; the methods and results of surveys for this species are discussed in the Biological Technical Report (Appendix E). None of the other state- and/or federally listed avian species associated with riparian/riverine habitat addressed in the MSHCP were observed or were otherwise determined to potentially occur on the Project site.

MSHCP: Narrow Endemic Plant Species (Section 6.1.3)

The Project site is outside of the MSHCP NEPSSA (RCA 2003). Therefore, no additional habitat assessment or focused surveys are required for Narrow Endemic Plant Species within the Project site. In addition, the Project would have MSHCP take coverage for all Narrow Endemic Plant Species, should they occur and be impacted by proposed development, with payment of the Local Development Mitigation Fee (RCTLMA 2003).

MSHCP: Additional Survey Needs and Procedures (Section 6.3.2)

The Project site is not within a MSHCP CASSA for plants, mammals, or amphibians (RCA 2003); therefore, a habitat assessment and focused surveys for Criteria Area Species are not required within the Project site. The Project would have take coverage for all Criteria Area Species with payment of the Local Development Mitigation Fee (RCTLMA 2003). In addition, the Project site does not support Delhi sands in areas that would trigger additional review for the Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*).

However, the entire Project site overlaps a MSHCP Burrowing Owl Habitat Assessment Area (RCA 2003). Therefore, a Step I habitat assessment in accordance with the MSHCP Burrowing Owl Survey Instructions (RCA 2006) was conducted as part of the 2022 reconnaissance site visit conducted by Dudek biologists. Because suitable habitat was determined to be present, protocol-level burrow and burrowing owl surveys (Step II-A and Step II-B) were conducted in 2023, as required for consistency with the MSHCP, to determine the presence or absence of burrowing owl. The methods and results of this survey effort are discussed in the Biological Technical Report (Appendix E).

MSHCP: Urban/Wildlands Interface (Section 6.1.4)

Section 6.1.4 of the MSHCP, Guidelines Pertaining to the Urban/Wildland Interface, provides for management of edge factors, such as lighting, urban runoff, toxics, and domestic predators, for proposed projects adjacent to the MSHCP Conservation Area (RCTLMA 2003). While lands within the MSHCP Conservation Area occur to the east/southeast of the Project site, the site itself is surrounded by dense residential and commercial development. The only waterway/drainage that is located adjacent to the site, the portion of the Riverside County flood control channel that bisects the southern portion of the site, flows further to the southwest and does not enter into any of the Conservation Area lands. As such, the measures and guidelines associated with Section 6.1.4 of the MSHCP would not apply to the Project.

Local

City of Moreno Valley Municipal Code

Section 9.17.03, Landscape and Irrigation Design Standards, of the Moreno Valley Municipal Code addresses the removal of trees as a result of project development. Specifically, the code stipulates that the removal of existing trees with 4-inch or greater trunk diameters at breast heigh (dbh) shall be replaced at a 3:1 ratio, with minimum 24-inch box size trees of the same species, or a minimum 36-inch box for a 1:1 replacement, in locations approved by the City. This section of the code also stipulates that the removal of heritage trees (trees with 15-inch dbh or more) is prohibited unless the tree "poses a dangerous or hazardous condition to people, structures, property, or another heritage tree" or "if the tree is diseased, dying, or dead, and if a reasonable undertaking to preserve the tree had occurred."

City of Moreno Valley General Plan 2040

Open Space and Resource Conservation Element

The Open Space and Resource Conservation Element of the City of Moreno Valley General Plan 2040 includes goals and policies related to protection and enhancement of open space and natural resources, preservation of cultural and scenic resources, promotion of water and energy efficiency, and promotion of waste reduction. The following relevant goals and policies identified in the Open Space and Resource Conservation Element are applicable to the Project (City of Moreno Valley 2021b)[1],:

Goal OSRC-1: Preserve, protect, and enhance natural resources, habitats, and watersheds in Moreno Valley and the surrounding area, promoting responsible management practices.

Policy OSRC.1-3: Maximize public access to natural resource areas where appropriate, to enhance environmental awareness and provide recreational opportunities.

Policy OSRC.1-5: Design stormwater detention basins as multi-use amenities providing recreation, aesthetic value, and wildlife habitat along with flood control.

Policy OSRC.1-8: Cooperate with federal, State, and local regulatory agencies as well as non-profit organizations to promote the responsible stewardship of natural resources and habitats within the planning area.

Policy OSRC.1-9: Ensure that adverse impacts on sensitive biological resources, sensitive natural communities, sensitive habitat, and wetlands are avoided or mitigated to the greatest extent feasible as development takes place.

Policy OSRC.1-10: In areas where development (including trails or other improvements) has the potential for adverse effects on special status species, require project proponents to submit a study conducted by a qualified professional that identifies the presence or absence of special-status species at the proposed development site. If special-status species are determined to be present,

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

require incorporation of appropriate mitigation measures as part of the proposed development prior to final approval.

Policy OSRC.1-11: Require all development, including roads, proposed adjacent to riparian and other biologically sensitive habitats to mitigate impacts to such areas.

Action OSRC.1-D: Continue to participate in the implementation of regional habitat conservation and restoration programs, including the Western Riverside County Multiple Species Habitat Conservation Plan and the Stephens' Kangaroo Rat Habitat Conservation Plan.

4.4.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G (Sections IV and XVIII) of the CEQA Guidelines, a significant impact related to biological resources would occur if the Project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The significance of impacts to biological resources was assessed by assessing the potential changes resulting from the Project to these significance thresholds. An evaluation of whether or not an effect on biological resources would be "substantial" with respect to the significance thresholds generally considers the following:

- amount and/or extent of the resource (numbers, acres, etc.) to be affected versus preserved
- the relative biological value (rarity, functions, and values) and/or sensitivity status of the resource and its relevance within a specified geographical area
- the type and severity of impact (i.e., would the project adversely affect wildlife through mortality, injury, displacement, or habitat loss or adversely impact vegetation through destruction of a sensitive plant population?)
- timing of the impact (i.e., would the impact occur at a critical time in the life cycle of a special-status plant or animal, such as breeding, nesting, or flowering periods?)
- duration of the impact (i.e., whether the impact is temporary or permanent)

The analysis of direct and indirect impacts covers construction, operation, and maintenance of the Project. Direct impacts include those that occur immediately as a result of the Project on a particular biological resource. Indirect impacts include those that are caused by the Project later in time, but that are still reasonably certain to occur.

4.4.4 Impact Analysis

4.4.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The majority of the site was in active agricultural use or seasonally fallow with several irrigation and drainage ditches crossing the site. No state- or federally listed threatened or endangered plant or animal species, including Stephens' kangaroo rat, were observed on the site during focused surveys. Non-listed sensitive wildlife species observed on site included loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), burrowing owl, black-shouldered kite (*Elanus axillaris*), northern harrier (*Circus hudsonius*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*); no sensitive plant species were observed during surveys conducted on the site. Approximately 9.4 acres of aquatic features, primarily agricultural reservoirs and drainages, were determined to be under state and/or federal resource agency jurisdiction.

Impacts to the sensitive bird species, if grading occurred during the nesting season, were considered potentially significant, and direct impacts to San Diego black-tailed jackrabbit were also considered potentially significant. The loss of jurisdictional aquatic features was considered potentially significant and subject to resource agency permitting (City of Moreno Valley 1999b).

Mitigation

As previously noted, the Project site is outside of the Stephens' Kangaroo Rat HCP Core Reserve Area but is within the Stephens' Kangaroo Rat HCP Fee Area; as such, the original SP 218 was required to pay the standard Stephens' Kangaroo Rat HCP Development Mitigation Fee, regardless of whether Stephens' kangaroo rat occurs on the site or not. Since payment of the fee would contribute to the acquisition/preservation of habitat expected to benefit all special-status species occurring in the Specific Plan Area, fee payment was considered adequate mitigation for potential impacts to these species. This fee was paid in full to the City in 2006 prior to the initial grading of the Specific Plan Area.

Because burrowing owls are a burrow-nesting species, additional mitigation for this species included preparation of a burrowing owl report that included prohibiting grading during the owl's nesting season.

Mitigation for loss of jurisdictional aquatic features included acquisition of permits from USACE and the California Department of Fish and Game (now CDFW), as well as enhancement/restoration of the drainage swale in the southern portion of the Project site.

2003 Supplemental EIR

Analysis

A writ of mandate required the 2003 Supplemental EIR to re-evaluate impacts to biological resources identified in the 1999 EIR. The 2003 Supplemental EIR was determined to be consistent with the 1999 EIR's analysis and identified no new impacts to biological resources (City of Moreno Valley 2003).

Mitigation

The mitigation measures identified in the 1999 EIR were found to be applicable to the 2003 Supplemental EIR, with the addition of new mitigation measures. Additional mitigation measures included the request that the County of Riverside use the Stephens' Kangaroo Rat HCP mitigation fees generated by the original SP 218 to acquire Stephens' kangaroo rat habitat adjacent to the San Jacinto Wildlife Area and the issuing of a non-income transfer of the "UCRF-owned Pettitte Hill/Moreno Peak lands" to the Eastern Metropolitan Water District (EMWD) to operate most of it as an open space preserve (City of Moreno Valley 2003).

2005 Addendum

Analysis

The 2005 Addendum evaluated a lake system in lieu of the previously proposed golf course. The lake system would create 38.8 acres of lakes and at least 5 acres of new riparian habitat in various areas along the lakes. This new habitat represented a replacement ratio of 10:1 for the habitat lost by development. The 2005 Aquabella SPA was determined to impact 0.47 acres of areas under USACE jurisdiction and 0.47 acres of areas under California Department of Fish and Game jurisdiction. The 2005 Aquabella SPA included an overall reduction in the amount of jurisdictional land to be impacted compared to the original SP 218. The analysis of biological impacts in the 2005 Addendum was consistent with the biological species impacts identified in the 1999 EIR (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was required; however, USFWS issued the Section 10(a) permit for the MSHCP on June 10, 2004, which required land outside of criteria areas to pay an impact mitigation fee to help fund the MSHCP program. The Aquabella site is not within MSHCP criteria cells and was, therefore, subjected to the mitigation fee.

4.4.4.2 Project Impact Analysis

Threshold 1: Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Special-Status Plants

As previously discussed, largely based on the disturbed nature of the site due to previous agricultural practices and grading and the resulting lack of suitable habitat, non-listed special-status plant species known to occur in the region are not expected to occur on the Project site. In addition, no special-status plant species have ever been recorded on the site during previous surveys conducted in association with prior CEQA review processes. Because

of the highly disturbed nature of the Project site and general lack of suitable habitat, three state- and/or federally listed plant species, San Jacinto valley crownscale, thread-leaved brodiaea, and spreading navarretia, known to occur in the Project region are not expected to occur on the Project site. In addition, the Project site is not within a MSHCP CASSA or NEPSSA; therefore, a habitat assessment and focused surveys for Criteria Area Species (including these three listed species) are not required within the Project site. Each of these species are fully covered by the MSHCP, even if impacts to such species should occur. As such, no further analysis is required for these plant species. In the unlikely event that any of these species would occur on the Project site prior to Project construction, potential impacts to these species would not be considered to have a substantial adverse effect, either directly or through habitat modifications, on any special-status plant species. Potential impacts would be less than significant.

Special-Status Wildlife

As previously discussed, a total of 16 special-status wildlife species were identified by various database searches as having some potential for occurrence on the Project site; 5 of these species were previously observed during surveys associated with the 1999 EIR. Due to the highly disturbed nature of the site, the potential for these previously observed species to occur on the site is considered low, with the exception of burrowing owl and least Bell's vireo (Table 4.4-2). Of the 16 species listed in Table 4.4-2, 14 are covered species under the MSHCP; as such, potential impacts or take of these species are covered by the MSHCP. Because the Project site is not within a MSHCP CASSA or NEPSSA, no additional surveys or analysis was required for nine of these species.

However, five of these species—burrowing owl, least Bell's vireo, Riverside fairy shrimp, San Diego fairy shrimp, and vernal pool fairy shrimp—though listed as MSHCP covered species, are subject to presence/absence surveys pursuant to the MSHCP. Protocol-level surveys were conducted in the spring and summer of 2023 for all five of these species. The remaining 2 species of the 16 potentially occurring on the site, long-eared owl and Crotch's bumble bee, are not listed as covered species under the MSHCP. Searches for long-eared owl were conducted concurrent with the burrowing owl surveys, and because Crotch's bumble bee is a State Candidate for being listed as Threatened, focused protocol surveys for this species were also conducted.

Burrowing Owl

Because the Project site is within the MSHCP Burrowing Owl Habitat Assessment Area (RCA 2003), pursuant to Section 6.3.2 of the MSHCP, focused protocol surveys were conducted during the summer months of 2023 across most of the Project site to determine the presence/absence of this species on the site. Prior to the surveys and pursuant to MSHCP guidance, a burrowing owl habitat assessment was also conducted. A more detailed discussion of the habitat assessment and survey methodology can be found in Appendix E.

No burrowing owl individuals, indicative sign, or active burrows were observed during the 2023 focused survey effort. However, one burrowing owl individual was incidentally observed within the central portion of the Project site on January 13, 2023, during fairy shrimp protocol surveys. The burrowing owl individual was flushed from a small mammal burrow within the central portion of the site that contained both whitewash and pellets. Because this individual was not observed during the breeding season surveys conducted in the late spring and summer months, it was concluded that this individual was likely temporarily using the Project site only during the winter months for foraging and potential roosting, which is typical during the non-breeding season when owls are relatively nomadic. No burrowing owls were observed in this area of the site, or elsewhere on the site, during the 4 months of fairy shrimp surveys that followed this initial sighting. In addition, this burrow was visited during the focused burrowing owl survey effort during the summer; no owls were observed at or near the burrow and no recent whitewash, food

pellets, feathers, or other sign was observed associated with the burrow. Searches for long-eared owl were also conducted concurrent with the burrowing owl surveys; no observations of this species were detected or recorded.

Because no actively nesting burrowing owls or any other non-breeding burrowing owls were observed during the extensive protocol-level surveys that were conducted on the site, the site is not concluded to be regularly used by this species for nesting, foraging, or shelter. Nevertheless, should burrowing owls move onto the site prior to or during Project construction, ground disturbance activities such as grading, contouring, and soil compaction can directly impact owls utilizing small mammal burrows for nesting or shelter. However, as previously noted, burrowing owl is a covered species under the MSHCP, such that any adverse impacts or take of the species or occupied habitat that may occur as a result of future proposed development of the Project site would be mitigated by various conservation measures included as part of the MSHCP. As such, potential impacts to burrowing owl would not be considered a substantial adverse effect, either directly or through habitat modifications, on a special-status species. Potential impacts would be **less than significant**.

Because Section 3503, and in particular Section 3503.5, of the California Fish and Game Code prohibits the take of active nests of most raptor and other avian species, including burrowing owl, **Mitigation Measure (MM) BIO-1** (Section 4.4.6.2 below) would be implemented as part of the Project to ensure compliance with these regulations, as well as the federal MBTA. **MM-BIO-1** is also consistent with several recommended measures included in the MSHCP to minimize direct impacts to any burrowing owls, and would also further minimize the Project's less than significant impact to this species.

Least Bell's Vireo

Pursuant to Section 6.1.2 of the MSHCP (RCTLMA 2003), protocol surveys for least Bell's vireo were conducted within the 2023 least Bell's vireo nesting season (generally April through July) to determine presence/absence of active nests or territories. Because this species is restricted to relatively dense riparian vegetation communities for nesting, surveys were conducted only within the limited areas of the site that contain suitable riparian habitat, primarily in the Line F mitigation channel along the southern edge of the Riverside County flood control channel and in a riparian area at the east end of the flood control channel and the Line F channel (Figure 4.4-1). Surveys for least Bell's vireo followed the Least Bell's Vireo Survey Guidelines (USFWS 2001). A more detailed discussion of the survey methodology and areas surveyed can be found in Appendix E.

During the course of the eight total rounds of surveys that were conducted between April and July of 2023, adult least Bell's vireos were either heard singing or were directly observed during six of the surveys. One adult male was observed in the western basin area of the Line F mitigation area during a May survey, while the remaining least Bell's vireos were all observed or heard singing within the riparian area at the eastern terminus of the Riverside County flood control channel. No least Bell's vireos were detected in any of the other riparian areas on the Project site, likely due to the relatively disturbed nature of these areas, the somewhat fragmented nature of these other communities, and the less dense canopy of these areas compared to what occurs adjacent to the Riverside County flood control channel. During a late June survey, a family group of vireos (i.e., an adult pair and three juveniles) was initially observed just off site to the north of this riparian area and later observed moving onto the Project site in the middle of this riparian area. Although no actual nests were located (USFWS survey protocols discourage searches for nests during the nesting season so as to minimize the potential for adverse impacts on nesting birds), based on all the observations it was determined that the riparian habitat within the easternmost riparian area was likely occupied by one non-mated adult and one family group of two adults (male and female) and three juveniles. A more detailed discussion of the survey results and least Bell's vireo locations can be found in Appendix E.

As previously noted, least Bell's vireo is a covered species under the MSHCP, such that any adverse impacts or take of the species that may occur as a result of future proposed development of the Project site would be mitigated by various conservation measures included as part of the MSHCP. Because the Line F riparian mitigation channel (Figure 4.4-1) will be protected in perpetuity, no impacts will occur to any least Bell's vireos nesting within or otherwise occupying habitat within this channel. The riparian area at the easternmost terminus of the Riverside County flood control channel (Figure 4.4-1) is just outside the Line F mitigation channel. Should development occur in this area, this would result in a loss of occupied least Bell's vireo habitat and the potential loss of active nests, should development occur during the nesting season of this species. However, the conservation measures included in the MSHCP for this species would mitigate this impact. Therefore, potential impacts to least Bell's vireo would not be considered a substantial adverse effect, either directly or through habitat modifications, on a special-status species. As such, potential impacts would be **less than significant**.

While the Project's impact to least Bell's vireo would be less than significant as a covered species under the MSHCP, in conformance with several recommended measures in the MSCHP to minimize direct impacts to least Bell's vireo and to ensure compliance with the protection provisions of Sections 3503 and 3513 of the California Fish and Game Code and the federal MBTA, **MM-BIO-2** is also included. **MM-BIO-2** would further minimize the Project's less than significant impact to least Bell's vireo.

Fairy Shrimp

Pursuant to Section 6.1.2 of the MSHCP (RCTLMA 2003), due to the presence of suitable pool habitat on the Project site detected during early 2023, protocol surveys for Riverside fairy shrimp, San Diego fairy shrimp, and vernal pool fairy shrimp, all state- or federally listed threatened or endangered species, were conducted during the spring and early summer months of 2023. The surveys followed the Survey Guidelines for Listed Large Branchiopods (USFWS 2017), which requires both a wet-season and a dry-season survey to determine presence/absence of listed fairy shrimp species. The wet-season surveys were conducted from January 13 through May 30, 2023, at which time all basins initially surveyed were dry and did not re-fill with rain water. A total of 62 inundated pools were sampled. The dry-season survey was conducted in June 2023 and included the collection of soil samples from all of the pooled areas once they were completely free from any water inundation. The samples were then provided to a USFWS-certified laboratory for analysis, during which samples containing fairy shrimp cysts (eggs) were re-hydrated and hatched in the lab for species identification. A more detailed discussion of the survey methodology and survey locations for these species can be found in Appendix E.

The wet-season surveys were negative for vernal pool fairy shrimp, San Diego fairy shrimp, and Riverside fairy shrimp. Of the basins that were sampled and found to contain fairy shrimp (8% of the basins sampled contained no fairy shrimp), only the common versatile fairy shrimp (*Branchinecta lindahli*) were detected. Similarly, the results of the dry-season analysis for all basins were also negative for the three listed fairy shrimp species; only the common, non-sensitive species (versatile fairy shrimp) was detected. The majority of the basins within the Project survey area were characterized as being of low quality habitat for the listed fairy shrimp species, which typically prefer naturally occurring vernal pool habitat; the on-site pooled areas are all artificially created by past grading and contouring activities, are overgrown with non-native grasses and forbs, and are regularly impacted by vehicle traffic from weed/grass mowing and maintenance activities. A more detailed discussion of the survey results for these species can be found in Appendix E.

Because no state- or federally listed fairy shrimp species were observed or otherwise detected during the extensive protocol-level surveys that were conducted on the site and because the site supports poor quality habitat for these species, none of these listed fairy shrimp species are expected to occur on the Project site. Furthermore, these

species are listed as covered species under the MSHCP, such that any adverse impacts or take of the species or occupied habitat that may occur as a result of future proposed development of the Project site would be mitigated by various conservation measures included as part of the MSHCP. As such, potential impacts to listed fairy shrimp species would not be considered a substantial adverse effect, either directly or through habitat modifications, on a special-status species. Therefore, potential impacts would be **less than significant**.

Crotch's Bumble Bee

Although Crotch's bumble bee is not addressed in the MSHCP, likely because it was only recently listed as a state candidate as a threatened species, focused protocol surveys were conducted to determine the presence/absence of the species on the Project site. Following an initial habitat assessment, surveys for Crotch's bumble bee were conducted in April, May, and June 2023 (as determined by the blooming period for target plant species). Because formal survey protocols have not yet been documented for this species, the surveys were based on guidance from the CDFW Region 6 office (March 23, 2023), which recommended use of the survey methods for rusty patched bumble bee (*Bombus affinis*), a federally listed bumble bee located in the midwestern United States, prepared by USFWS (USFWS 2019).

No Crotch's bumble bee individuals or bee nests were observed during any of the survey efforts. Only one common bumble bee (*Bombus* sp.) was observed during the June 8, 2023, survey. No other bumble bees were observed during the course of all surveys conducted. Given the lack of observations of Crotch's bumble bee or potential bumble bee nests within the Project site and the general disturbed nature and poor quality of potential nectar habitat on the site, this species is not expected to occur on the Project site. A more detailed discussion of the survey methodology and results for this species can be found in Appendix E.

Because no Crotch's bumble bee individuals or nests were observed and because this species is not expected to occur on the site in the future due to the disturbed nature of the site and the general lack of suitable habitat for this species, no impacts are expected to occur to Crotch's bumble bee due to ground-disturbance activities associated with Project development. As such, potential impacts to Crotch's bumble bee would not be considered a substantial adverse effect, either directly or through habitat modifications, on a special-status species. Therefore, potential impacts would be **less than significant**.

Other Special-Status Species

Ground disturbance and any species habitat disturbance or destruction associated with Project construction and development could result in direct and indirect impacts to several of the remaining special-status species listed in Table 4.4-2, should they occur on site prior to the initiation of construction. However, because of the highly disturbed nature of the site (approximately 70% of the site) in areas proposed for construction, any of these species potentially occurring on the site prior to construction are expected to only occur temporarily or in such low numbers that potential impacts on individual animals would not be considered substantial. In addition, because 14 of the 16 special-status species either observed or with some potential to occur on the site within areas proposed for development are covered species under the MSHCP, any potential direct or indirect impacts on these species, should they occur on site prior to Project construction, would be mitigated by various avoidance and minimization measures, as well as regional habitat preservation initiatives, incorporated into the MSHCP. For these reasons, potential direct or indirect impacts (including the conversion of most of the site to a developed condition) on any of the remaining special-status species observed or potentially occurring on the would not be considered a substantial adverse effect, either directly or through habitat modifications, on a special-status species. As such, potential impacts would be **less than significant**.

All native avian species, common or of special status, are protected under Sections 3503, 3503.5, and/or 3513 of the California Fish and Game Code, as well as the federal MBTA. Because these regulations are not included within the take protections under the MSHCP, **MM-BIO-3** is provided further below, which would ensure compliance with the protection provisions of these regulations. This mitigation measure would also further minimize the Project's less than significant impact to special-status avian species.

Threshold 2: Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Two riparian vegetation communities occurring on the Project site are documented as sensitive by the CDFW: cottonwood–red willow/arroyo willow/mulefat association, which occurs within the Line F riparian mitigation channel and was planted as mitigation associated with the acquisition of permits from the CDFW and USACE for earlier impacts on agricultural drainages previously occurring on the Project site, and black willow/mulefat association, which occurs within the riparian area at the eastern terminus of the Riverside County flood control channel and just outside the eastern terminus of the Line F mitigation channel. Both of these communities are considered by CDFW as high priority for inventory (i.e., State Rank [S] 1, 2, or 3) (see Table 4.4-1). In addition, the black willow/mulefat association vegetation in this location also supports at least one active least Bell's vireo territory as evidenced by the results of the 2023 surveys conducted for this species. Because the remaining patches of riparian habitat elsewhere on the site (see Figure 4.4-1) that will be impacted are small and fragmented in nature, are only associated with shallow pools that form within graded/contoured (non-vernal) areas during rain events, and are not associated with any on-site streams or drainages, the loss of these small patches of habitat is not considered a substantial effect on a riparian or sensitive natural community. No other natural vegetation communities considered sensitive by CDFW or USFWS occur on the Project site.

While the cottonwood–red willow/arroyo willow/mulefat association occurring within the Line F mitigation channel will be preserved in perpetuity, the black willow/mulefat association occurring within the riparian area at the eastern terminus of the Riverside County flood control channel is just outside the Line F mitigation channel. Because the Black Willow/Mulefat Association in this area is relatively small, is fragmented from any other similar vegetation in the area, is essentially surrounded by residential development, and is disturbed through ongoing human activity (off-road vehicles and pedestrian traffic), the loss of this community, in and of itself, resulting from any proposed development within this area would not be considered a substantial adverse effect on any riparian habitat or other sensitive natural community. As such, these impacts would be **less than significant.** As previously noted, because least Bell's vireo is a covered species under the MSHCP, any loss of occupied habitat or direct take of this species in this riparian area would be mitigated through the conservation measures incorporated into the MSHCP.

Threshold 3: Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

As previously discussed, a number of shallow pools formed, primarily within the central portion of the Project site, as a result of abnormally heavy rainfall events during the winter/spring of 2022–2023. These pools formed within low-lying areas and pads that were established during the initial grading and contouring of the site, including within areas for a human-made lake feature. These lower-lying areas have been compacted during the previous grading activities and with that compaction, the general flat topography of the site, and the lack of water outflows, the heavy 2022–2023 rain events resulted in the shallow pooling that was observed within many of these areas, most of

which were inundated for a period of time. None of these pooled areas were ever documented as occurring on the site during previous surveys and assessments associated with earlier CEQA review processes.

In spring 2023, a field assessment was conducted at each of these pooled areas to determine if any of these features met the criteria to be considered a vernal pool, pursuant to the MSHCP, by virtue of supporting vernal pool indicator plant species and other characteristics such as soil type/consistency and hydrology. The assessment confirmed that considering the fully manufactured landscape throughout most of the Project site, the general lack of surface soils in the vicinity of the pool locations, the lack of primary vernal pool indicator plant species, and the lack of hydrological connectivity, none of these pools were determined to be vernal in nature. In addition, due to the current absence of on-site creeks or other drainage features on the site, none of these pools are hydrologically or biologically linked to any such drainage. No other wetland or aquatic features (other than the Riverside County flood control channel in the southeastern portion of the site) occur on the Project site. A more detailed discussion of the survey methodology and results of this assessment can be found in Appendix E.

Given the non-vernal nature of the on-site pools, the lack of any hydrological or other linkage to any on-site drainage features, and the lack of any other aquatic features on the site potentially under state and/or federal resource agency jurisdiction, development of the proposed Project would not be considered a substantial adverse effect on state- or federally protected wetlands. Therefore, such potential impacts on these resources would be **less than significant.**

The riparian area that occurs at the eastern terminus of the Riverside County flood control channel on the Project site (Figure 4.4-1) contains a well-defined natural drainage that joins the Riverside County flood control channel that bisects the southern portion of the Project site. Based on a review of aerial imagery and other maps, the channel continues off site to the southwest and then veers south, sometimes channelized and sometimes appearing as a soft-bottomed drainage, where it eventually connects to Canyon Lake and then, further to the south, to Lake Elsinore, both of which are considered waters of the United States under USACE Section 404 jurisdiction. Consequently, this drainage in the eastern portion of the Project site is assumed to be under the regulatory jurisdiction of CDFW, pursuant to Section 1602 of the California Fish and Game Code; USACE pursuant to Section 404 of the federal CWA; and the Regional Water Quality Control Board pursuant to the state Porter-Cologne Act. Because the drainage and associated riparian vegetation in this area is relatively small, is essentially surrounded by residential development, and is heavily disturbed through ongoing human activity (off-road vehicles, pedestrian traffic, and human activities), the overall biological functions and values of this small segment of the drainage is considered to be relatively low. As such, impacts to this drainage, in and of itself, would not be considered a substantial adverse effect on state- or federally protected wetlands or other aquatic resource. Therefore, any such impacts would be **less than significant** with respect to CEQA.

However, because this portion of the drainage is assumed to be under the regulatory jurisdiction of CDFW, USACE, and the Regional Water Quality Control Board, any proposed development in this area that would result in dredging or fill of the drainage and/or removal of associated riparian vegetation is expected to trigger the need for associated permits from these agencies that would have to be obtained by the applicant prior to impacts to a jurisdictional resource.

Threshold 4: Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The Project site is essentially surrounded by dense residential and commercial development and major arterial roads, which severely limit the ability of terrestrial animal species to access the Project site. While there are some undeveloped parcels of land immediately to the north of the site, these parcels are also bordered by existing

development and/or arterial roads, and most of the parcels are managed as agricultural lands, which typically do not provide suitable movement habitat for terrestrial animal species. As such, no open space or habitat linkages connect the Project site with other large natural open space areas in the vicinity. In addition, no documented or established migratory movement corridors or landscape linkages are known to occur adjacent to or within the Project site. The Riverside County flood control channel in the southeastern portion of the site is a concrete and channelized structure; no suitable vegetation or substrate that would serve as a viable corridor for various terrestrial animal species during movement events occurs within the portion of the channel on the Project site. After entering the site to the northeast and exiting the site to the southwest, the channel extends in both directions within dense residential/commercial development; thus, this channel is not known or expected to be used as a movement corridor by wildlife species.

Because of the extensively disturbed nature of the Project site, the dominance of the site by open non-native grasslands in the less disturbed areas, and the general lack of existing natural habitat to support wildlife nursery sites (bat roosts or maternity sites, bird nest rookeries, etc.), no such nursery sites are known to occur or expected to occur on the site.

Because development of the Project site would not interfere substantially with the movement of any native or migratory fish or wildlife species or with established wildlife corridors or impede the use of native wildlife nursery sites, potential impacts on these resources would be **less than significant.**

Threshold 5: Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

As previously noted, Section 9.17.03 of the City of Moreno Valley Municipal Code addresses the removal of trees as a result of project development. Specifically, the code stipulates that the removal of existing trees with 4-inch or greater trunk dbh shall be replaced at a 3:1 ratio, with a minimum 24-inch box size trees of the same species, or a minimum 36-inch box for a 1:1 replacement, in locations approved by the City. This section of the code also stipulates that the removal of heritage trees (trees with 15-inch dbh or more) is generally prohibited unless certain conditions are met (i.e., the tree poses a dangerous or hazardous condition to people, structures and property, or if the tree is diseased, dying, or dead, and if a reasonable undertaking to preserve the tree had occurred).

The only trees that appear to have a dbh of 4 inches or greater on the Project site occur within the riparian area at the eastern terminus of the Riverside County flood control channel in the southeastern portion of the Project site. If development were to occur in this area, the removal of any trees with 4-inch or greater trunk dbh would conflict with the sections of the City's Municipal Code that regulate tree removal. As such, any removal of City-regulated trees would be considered a **potentially significant impact**. Development of the Project will not conflict with any other local policies or ordinances protect or otherwise regulate biological resources. To prevent potential impacts to City-regulated trees, **MM-BIO-4** would be implemented as part of the Project to ensure consistency with the City of Moreno Valley Municipal Code.

Threshold 6: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As discussed in Section 4.4.2 above, the entire Project site is within the MSHCP Plan Area. As such, development of the Project site must comply with all relevant measures of the MSHCP as presented in Volume I, Chapter 6.0 (RCTLMA 2003). Therefore, the Project would not conflict with the provisions of this MSHCP, and no impacts would occur.

The Project site is outside of the Stephens' Kangaroo Rat HCP Core Reserve Area but is within the Stephens' Kangaroo Rat HCP Fee Area. Therefore, the Project has take coverage for any Stephens' kangaroo rat potentially occurring on the site (though they are not expected to occur due to the general lack of suitable habitat). Projects within the MSHCP are required to pay the standard Stephens' Kangaroo Rat HCP Development Mitigation Fee, regardless of whether Stephens' kangaroo rat occurs on a given site or not. This fee was paid in full to the City in 2006 prior to the initial grading of the Project site. Therefore, the Project would not conflict with the provisions of this HCP, and **no impact** would occur.

4.4.5 Significance of Impacts Before Mitigation

Threshold 1: Substantial Adverse Effect on Special-Status Species

Impacts would be **less than significant**.

Threshold 2: Substantial Adverse Effect on Riparian Habitat or Sensitive Natural Communities

Impacts would be **less than significant**.

Threshold 3: Substantial Adverse Effect on State or Federal Wetlands

Impacts would be **less than significant**.

Threshold 4: Interfere Substantially with Wildlife or Fish Movement or Nursery Sites

Impacts would be **less than significant**.

Threshold 5: Conflict with Any Local Policies or Ordinances

Impacts to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code would be **potentially significant**.

Threshold 6: Conflict with Habitat Conservation Plan, Natural Community Conservation Plan, or other Conservation Plan

There would be **no impact**.

4.4.6 Mitigation Measures

4.4.6.1 Previously Adopted Mitigation Measures

1999 EIR

1. Project will contribute $500 per graded acre to Stephens' Kangaroo Rat Habitat Conservation Plan. As the Stephens' kangaroo rate reserves are planned for benefit of multi-species conservation, including those found on-site, the contribution will mitigate for cumulative impacts to these species.
2. Prior to grading, survey for burrows and avoid owls during nesting season. This avoids direct impacts to burrowing owl.
3. Proposed golf course water feature and use of natural grass-lined channels and detention basins would result in no net loss of wetlands.

2003 Supplemental EIR

1. The University of California, Riverside will request that the County of Riverside use the Stephens' Kangaroo Rat HCP mitigation fees generated by the project be used to acquire Stephens' kangaroo rat habitat adjacent to the San Jacinto Wildlife area, including, but not limited to the parcel of land known as the "Lee/Stueve" property. This property is part of the Moreno Highlands property. About 1,000 acres of the Moreno Highlands property, adjacent to the San Jacinto wildlife area, has been acquired by the state (Specter, pers com. 2003).
2. The University of California, Riverside will issue a non-income transfer of the UCRF-owned Pettit Hill/Moreno Peak lands to the Eastern Metropolitan Water District (EMWD), a public agency. The Pettit Hill land is located on parcel number 47731 0011-2 on the west side of Moreno Beach Drive in the City of Moreno Valley. Figure 7 shows the 52-acre site. As a condition of the transfer, EMWD has agreed to take title of the property and retain 50 of the 52 acres in a natural state. Recreational trail (s) may be constructed on the property. The other two acres are adjacent to existing EMWD facilities, and EMWD will be permitted, with certain limitations, to develop additional facilities on that site.
3. The proposed Specific Plan and subsequent tentative maps shall be required to participate in the Stephen's Kangaroo Rat Habitat Conservation Plan. This will include payment of the appropriate fees.
4. Prior to disturbance of land that may contain burrowing owls, the developer shall submit a burrowing owl report prepared by a qualified biologist to the Community and Economic Development Department. The report shall identify project-specific mitigation measures, which may prohibit grading from March to July.
5. Streambed alteration shall be subject to Section 404 of the Clean Water Act, which covers the dredge and fill deposition in waters of the U.S. and a Section 1601/1603 Stream Bed Alteration Agreement.
6. The golf course shall include detention ponds/reservoirs and native riparian species.

2005 Addendum

No additional mitigation measures were required.

Summary

The previous mitigation measures are not carried through to the SEIR. The previous mitigation measures are no longer relevant, have been completed, or will be rescinded and replaced with the below mitigation measures.

4.4.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

Burrowing Owl

Although no burrowing owls were observed on the Project site during the 2023 nesting season surveys, burrowing owls could potentially use on-site small mammal burrows and artificial openings (e.g., culverts, pipes, rock pile crevices) for roosting or sheltering during the non-nesting season (burrowing owls are year-round residents in Southern California), or owls could move onto the site and use these features as nest burrows during future nesting seasons. Any potential impacts/take of this species is provided for by the MSHCP. However, in the event that burrowing owls occur on site during future construction or ground disturbance activities, the following measures

shall be implemented to ensure compliance with the protection provisions of Sections 3503 and 3513 of the California Fish and Game Code, as well as with the federal MBTA.

MM-BIO-1: Burrowing Owl.

- Within 30 days of any Project-related construction or ground-disturbance activities within suitable burrowing owl habitat on the site, a pre-construction survey shall be conducted by a qualified biologist to search for burrows or suitable artificial openings that may support roosting or nesting burrowing owls. The surveys shall follow the protocols outlined in the Riverside Conservation Authority's 2006 Burrowing Owl Survey Instructions for the MSHCP Area. If no active burrows/burrow surrogates are located, no further mitigation is required.
- If burrows/surrogate burrows are determined to be active during the survey, as evidenced by detection of burrowing owl individuals or sign (e.g., owl pellets, molted feathers, abundant insect remains, whitewash) at the burrow entrance, the burrow shall be demarcated on an appropriate map and highly visible fencing immediately erected around the burrow to protect it from inadvertent ground-disturbing activities. If the active burrows are located during the nesting season, the qualified biologist shall take the appropriate actions (e.g., burrow monitoring, use of motion-detection cameras) to determine if the burrow is being used as a nest burrow. If the burrow is determined to be an active nest burrow, a minimum 500-foot no disturbance buffer shall be established around the burrow. The buffer shall be demarcated on appropriate construction maps and in the field by highly visible fencing. Signage indicating that the area within the fencing is not to be entered shall be attached at appropriate distances along the fence.
- A qualified biologist shall be on site at any time construction or ground disturbance activities will occur within 600 feet of the nest burrow to ensure no encroachment occurs within the buffer area, to check on buffer fencing stability and effectiveness, and to monitor the behavior of adult burrowing owls to ensure that noise and activity associated with the construction activities is not causing excessive agitation or other abnormal behavior in observed adult burrowing owls. If, in the professional opinion of the biologist, observed continued agitation could result in adult burrowing owls being away from an active nest burrow for extensive periods of time that would be considered harmful to eggs or young or that could result in nest abandonment, the biologist shall have the authority to stop construction or ground disturbance activities within the 600 feet of the nest burrow until it is determined by the biologist that the agitated or other abnormal behavior has ceased long enough such that no harm to an active nest burrow is expected to occur.
- The no-disturbance buffer and associated fencing shall be in place, and the restriction on construction activities within the fenced area enforced, until it is determined by the qualified biologist that all young have fledged from the nest burrow and are no longer dependent upon the use of the burrow for survival. Following the fledging of young from any active burrows, burrowing owls can be excluded from future use of the burrow following California Department of Fish and Wildlife (CDFW) protocols.
- If active burrows are detected outside of the nesting season, or during the nesting season but it has been determined that the burrow is not being used as a nest burrow, burrowing owls can be excluded from use of the burrow following CDFW protocols.
- All pipes of at least 4 inches or more in diameter that are being temporarily stored or that are otherwise located on the Project site awaiting installation during construction or ground

disturbance activities shall be inspected at the beginning of each day to ensure that no burrowing owls are temporarily utilizing the pipes for shelter. Alternatively, the pipes can be capped at the end of each day (after first inspecting each pipe for burrowing owls or other animal species) and uncapped the following day prior to use. If owls or other animal species are observed within a pipe during the inspections, a qualified biologist, or other personnel trained by the biologist, shall use appropriate means to safely encourage the owl/animal to exit the pipe.

Least Bell's Vireo

Although impacts to the least Bell's vireo would be less than significant because observations on the Project site were limited, occurring only within the riparian area just east of the terminus of the channelized portion of the Riverside County flood control channel in the southeastern portion of the Project site, and because any potential impacts/take of this species is provided for by the MSHCP, the following measures shall be implemented to ensure compliance with the protection provisions of Sections 3503 and 3513 of the California Fish and Game Code, as well as with the federal MBTA.

MM-BIO-2: Least Bell's Vireo.

- A qualified biologist shall conduct pre-construction surveys within the riparian habitat mitigation area where least Bell's vireos were previously observed in 2023 to determine if least Bell's vireos are continuing to nest within this area. The extent and timing of the surveys shall depend on when construction or ground disturbance activities will occur within 700 feet of the riparian area during the vireo nesting season. The focus shall be to conduct as many surveys as possible (up to two surveys per week and a maximum of eight total surveys). Alternatively, if ground disturbance/construction activities will occur during future vireo nesting seasons, the assumption shall be made that least Bell's vireo continue to nest in the same areas as were observed in 2023, thus negating the need to conduct additional presence/absence surveys.
- If surveys are conducted and no least Bell's vireos are observed, then no additional mitigation measures need to be implemented. If surveys are conducted and least Bell's vireos are observed, and it is determined, through additional surveys and behavioral observations, that a nesting territory has been established within the area being surveyed, then a no-disturbance buffer of at least 500 feet from the edge of the riparian habitat area where the nesting territory occurs shall be established. The buffer shall be demarcated on all appropriate construction maps and in the field by highly visible fencing. Signage indicating that the area within the fencing is not to be entered shall be attached at appropriate distances along the fencing.
- If active nest territories are determined to be present, a qualified biologist shall be on site any time construction or ground disturbance activities will occur within 700 feet of the Line F mitigation channel riparian area and/or the riparian area to the east of the Riverside County flood control channel to ensure that no encroachment occurs within the buffer area, to check on buffer fencing stability and effectiveness, and to monitor the behavior of adult vireos to watch for any evidence of alarm vocalizations or other abnormal behavior from that might indicate some level of agitation associated with ground disturbance/construction-related noise or visual activity. If, in the professional opinion of the biologist, continued agitated behavior of adult birds could result in the birds being away from an active nest for extensive periods of time that would be considered harmful to eggs or young or that could result in nest

abandonment, the biologist shall have the authority to stop construction/ground disturbance activities until it is determined by the biologist that the agitated or other abnormal behavior has ceased long enough such that no harm to an active nest is expected to occur.

- The no-disturbance buffer and associated fencing shall be in place, and the restriction on construction activities within the fenced area enforced, until it is determined by the qualified biologist that all young and adult vireos have left the riparian habitat area and/or the breeding season is over (generally by July 30).

Other Avian Species

In the event that construction-related ground disturbance activities would occur during the nesting season (generally April through July in the Project region) of any of the avian special-status species listed in Table 4.4-2 (other than least Bell's vireo and burrowing owl, which are addressed in **MM-BIO-1** and **MM-BIO-2**), or any other native common species known to occur in the region, the following measure shall be implemented to comply with the protection provisions of Sections 3503 and 3513 of the California Fish and Game Code and the federal MBTA.

MM-BIO-3: Other Avian Species.

- A pre-construction nesting bird survey shall be completed by a qualified biologist if construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the avian nesting season to determine if any native birds protected by the federal Migratory Bird Treaty Act and/or the California Fish and Game Code are nesting within proposed ground-disturbance areas or within 200 feet of these disturbance areas.
- If any active nests are observed during surveys, a suitable avoidance buffer from the nests shall be determined by the qualified biologist. The avoidance buffer distance shall consider such factors as the species of bird, topographic features, intensity and extent of the disturbance, timing relative to the nesting cycle, and anticipated ground disturbance schedule.
- Limits of construction to avoid active nests shall be established in the field with flagging, fencing, or other appropriate materials and shall be maintained until any young of an active nest have fledged and are no longer dependent upon the nest for survival as determined by the qualified biologist.

City Regulate Trees

Impacts to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code would be potentially significant. To ensure a less than significant impact and to ensure compliance with applicable regulation, the following mitigation measure shall be implemented.

MM-BIO-4: City Regulated Trees.

Prior to any removal of trees potential regulated by the City of Moreno Valley Municipal Code, a qualified arborist shall conduct a tree survey in the area on the Project site in which regulated trees are proposed to be removed. Date to be collected on appropriate data forms include the exact location of the tree, species, diameter at breast height, and information on the general character and health of the tree. All regulated trees to be removed shall be flagged in the field and entered into a GIS database.

Pursuant to Section 9.17.03 of the City of Moreno Valley Municipal Code the removal of existing trees with 4-inch or greater trunk diameter at breast height (dbh) shall be replaced at a 3:1 ratio, with a minimum 24-inch box size trees of the same species, or a minimum 36-inch box for a 1:1 replacement, in locations approved by the City. Pursuant to the Municipal Code, removal of trees that would be classified as heritage trees (trees with 15-inch dbh or more) is generally prohibited unless certain conditions are met (i.e., the tree poses a dangerous or hazardous condition to people, structures and property, or if the tree is diseased, dying, or dead, and if a reasonable undertaking to preserve the tree had occurred).

4.4.7 Significance of Impacts After Mitigation

Threshold 1: Substantial Adverse Effect on Special-Status Species

Impacts would be **less than significant**; however, **MM-BIO-1** through **MM-BIO-3** would be implemented to further minimize the Project's less than significant impact and ensure compliance with regulatory requirements.

Threshold 2: Substantially Reduce or Restrict a Rare or Endangered Plant or Animal

Impacts would be **less than significant**; no mitigation would be required.

Threshold 3: Substantially Reduce Fish or Wildlife Habitat or Population

Impacts would be **less than significant**; no mitigation would be required.

Threshold 4: Substantial Adverse Effect on Riparian Habitat or Sensitive Natural Communities

Impacts would be **less than significant**; no mitigation would be required.

Threshold 5: Substantial Adverse Effect on State or Federal Wetlands

Impacts would be **less than significant**; no mitigation would be required.

Threshold 6: Interfere Substantially with Wildlife or Fish Movement or Nursery Sites

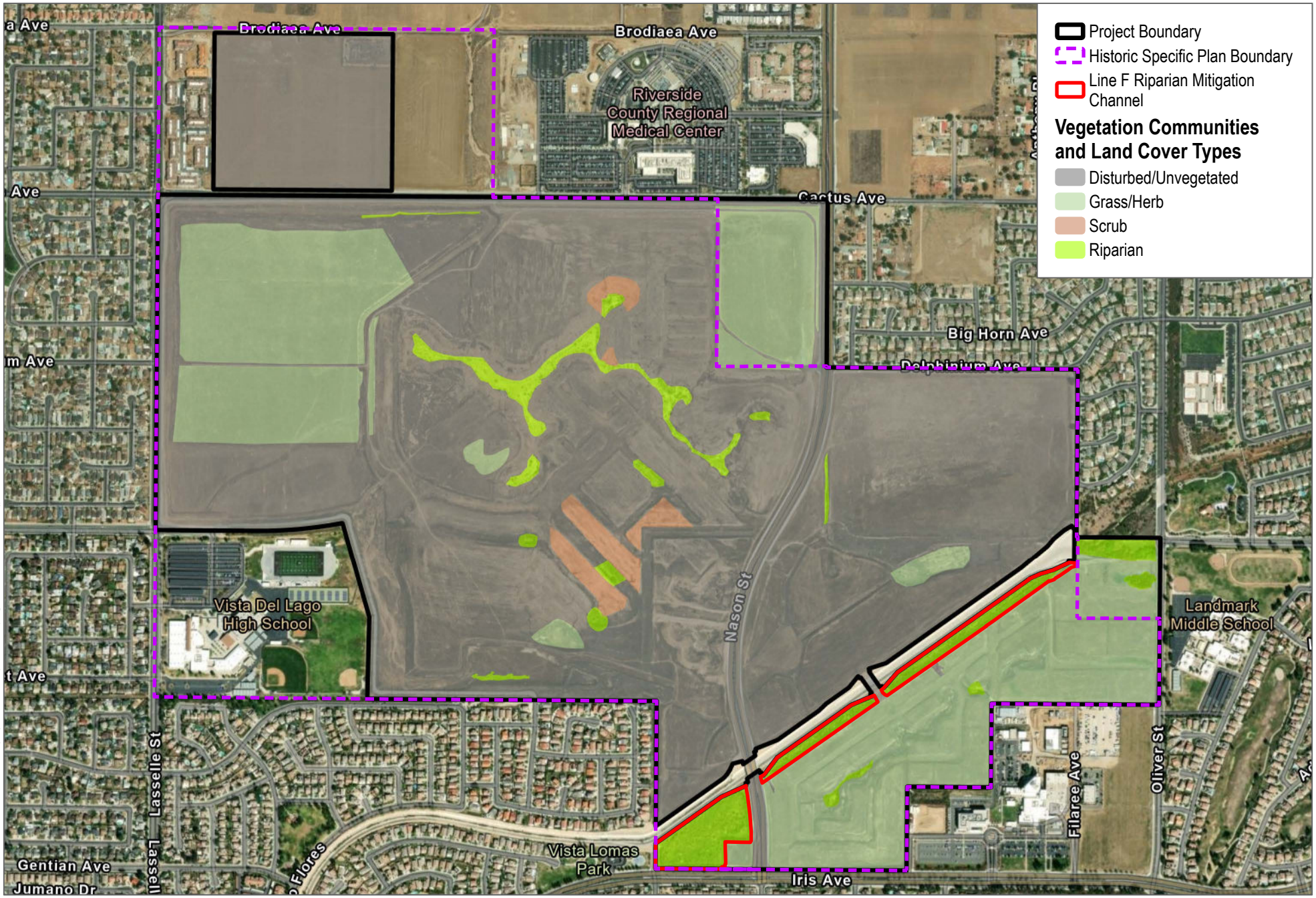
Impacts would be **less than significant**; no mitigation would be required.

Threshold 7: Conflict with Any Local Policies or Ordinances

Impacts to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code would be **less than significant with implementation of MM BIO-4**.

Threshold 8: Conflict with Habitat Conservation Plan, Natural Community Conservation Plan, or other Conservation Plan

There would be **no impact**; no mitigation would be required.



SOURCE: Maxar 2022

DUDEK

0 500 1,000 Feet

FIGURE 4.4-1

Vegetation Communities and Land Cover Types

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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4.5 Cultural Resources

This section describes the existing cultural resources conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report for the Moreno Valley Field Station Specific Plan (1999 EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum) found the previously approved projects would result in less than significant impacts related to cultural resources as no cultural resources were identified on the site (City of Moreno Valley 1999b, 2005b). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) did not discuss impacts to cultural resources.

The information in this section is based on the Negative Cultural Resources Inventory Report for the Aquabella Specific Plan Amendment Project prepared by Dudek in January 2024 (Appendix F), the 2023 geotechnical report prepared by Engeo Inc. for the Project site (Appendix C), and the City of Moreno Valley General Plan 2040 (2040 General Plan)[1],

4.5.1 Existing Environmental Conditions

The following sections describe the archaeological background and history of the Project site and discuss known historic, archaeological, and cultural resources in or around the Project's area of potential effects (Project area). The Project area is the geographic area or areas in which an undertaking may directly or indirectly cause alterations in the character or use of cultural resources, if any exist, and here includes the Project site and off-site improvement areas (i.e., roadway, infrastructure/utilities).

4.5.1.1 Project Location and Setting

The Project area is located in the southeastern portion of the City of Moreno Valley (City), south of State Route 60 (Moreno Valley Freeway), east of Lasselle Street, north of Iris Avenue, and west of Oliver Street in Riverside County, California. The Project area is bisected by Nason Street and is located at Sections 15, 16, 21, 22, and Range 3 West and Township 3 South in the U.S. Geological Survey 7.5-minute Series Sunnymead California Quadrangle. Specifically, the Project area consists of 668.6 acres located on Assessor's Parcel Numbers (APNs) 486-300-013, 486-280-056 486-310-014, 486-320-012, 486-320-009, 486-300-012, 486-320-010, 486-320-011, and 486-310-035, as well as rights-of-way. The Nason Street right-of-way is located within applicant ownership and is part of the Project area; however, the flood control channel was dedicated to the Riverside County Flood Control and Water Conservation District and is not located within the Project area.

The Project area is relatively flat and highly disturbed. The Project area has undergone substantial earth movement as it was historically used for agricultural purposes and a majority of the Project area has been mass graded. Since 1962, the site has been utilized by the University of California, Riverside, for the growing of experimental and commercial agricultural corps (City of Moreno Valley 1999b). The California Department of Fish and Wildlife, Regional Water Quality Control Board, and U.S. Army Corps of Engineers issued regulatory permits (Notification

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

No. 1600-2005-0146-R6 and Reference No. 200501583) for the 2005 Aquabella SPA in 2006 and the City issued a grading permit (Permit No. MV-0826, Project No. PM-33532) in 2007, which resulted in approximately 65% of the Project area being graded to a depth of between 5 and 10 feet.

4.5.1.2 Cultural Setting

Prehistoric Context

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. However, given the direction of research and differential timing of archaeological study following intensive development in Riverside and San Bernardino Counties, chronology building in the Inland Empire must rely on data from neighboring regions to fill the gaps. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC to AD 500), Late Prehistoric (AD 500 to 1769), and Ethnohistoric (post-AD 1769).

Paleoindian Period (pre-5500 BC)

Evidence for Paleoindian occupation in the region is tenuous. Our knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from CA-SDI-4669/W-12 in La Jolla. A human burial from CA-SDI-4669 was radiocarbon dated to 9,920 to 9,590 years before present (95.4% probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large-stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of ground stone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on Naval Air Weapons Station China Lake near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (CA-MNO-679)—a multicomponent fluted point site—and CA-MNO-680—a single component Great Basin Stemmed point site (Basgall et al. 2002). At CA-MNO-679 and -680, ground stone tools were rare while finely made projectile points were common.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (CA-SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between 10,365 and 8200 BC (Warren et al. 2004). Termed San Dieguito (see also Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (see also Warren 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos's interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito

components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the San Diego region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key Early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

San Dieguito sites are rare in the inland valleys, with one possible candidate, CA-RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at CA-RIV-2798/H produced a toolkit consisting predominantly of flaked stone tools, including crescents, points, and bifaces, as well as lesser amounts of ground stone tools, among other items (Grenda 1997). A calibrated and reservoir-corrected radiocarbon date from a shell produced a date of 6630 BC. Grenda suggested this site represents seasonal exploitation of lacustrine resources and small game, and resembles coastal San Dieguito assemblages and spatial patterning.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but it was also not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, where hunting-related tools were replaced by processing tools during the Early Holocene (Basgall and Hall 1990).

Archaic Period (8000 BC to AD 500)

The more than 2,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in Southern California. If San Dieguito is the only recognized Paleoindian component in coastal Southern California, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the region (Hale 2001, 2009).

The Archaic pattern, which has also been termed the Millingstone Horizon (among others), is relatively easy to define with assemblages that consist primarily of processing tools such as milling stones, hand stones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (Basgall and Hall 1990; Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the bow and arrow were adopted around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities, and already low amounts of formal flake tools were replaced by increasing amounts of expedient flake tools. Similarly, shaped milling stones and hand stones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bow and ceramics.

Late Prehistoric Period (AD 500 to 1769)

The period of time following the Archaic and before the Ethnohistoric (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004); however, several other subdivisions continue to be used to describe various shifts in assemblage composition. In general, this period is defined by the addition of arrow points and ceramics, as well as the widespread use of bedrock mortars. The fundamental Late Prehistoric assemblage is very similar to the Archaic pattern but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred before AD 1400. In Riverside County and the surrounding region, milling stones and hand stones persisted in higher frequencies than mortars and pestles until the last 500 years (Basgall and Hall 1990); even then, weighing the economic significance of milling stone-hand stone versus mortar–pestle technology is tenuous due to incomplete information on archaeological assemblages.

Ethnohistoric Period (post-AD 1769)

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Geiger and Meighan 1976; Harrington 1934; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the pre-contact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as “salvage ethnography,” was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his “memory culture” approach (Lightfoot 2005: 32) by recording languages and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities.

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about Native American life before the arrival of Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja (lower) California Sur to the southern Oregon border at the time of Spanish contact (Johnson and Lorenz 2006). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007).

Victor Golla has contended that one can interpret the amount of variability within specific language groups as being associated with the relative "time depth" of the speaking populations (Golla 2007: 80). A large amount of variation within the language of a group represents a greater time depth than a group's language with less internal diversity. One method that he has employed is by drawing comparisons with historically documented changes in Germanic and Romantic language groups. He has observed that the "absolute chronology of the internal diversification within a language family" can be correlated with archaeological dates (Golla 2007: 71). This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

The tribes of this area have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007). These groups include the Gabrielino, Cahuilla, and Serrano. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan circa 2600 BC to AD 1, which was later followed by the diversification within the Takic speaking tribes, occurring approximately 1500 BC to AD 1000 (Laylander 2014).

The Project is located within the area associated with the Gabrielino, a name derived from the association with the San Gabriel Mission, who are also known as the Tongva. According to the archaeological record, they were not the first inhabitants of the Los Angeles basin but displaced indigenous Hokan speakers around 500 BC. The Gabrielino shared boundaries with the Chumash to the west, the Tataviam to the north, Serrano to the northeast, the Cahuilla to the east, and the Luiseño and Juaneño to the southwest (Bean and Smith 1978; Kroeber 1925).

As with many Native American groups, it is difficult to make population estimates for the Gabrielino, although one estimate gives village population ranges between 50 and 200 people in a village, with possibly more than 50 or 100 villages (Bean and Smith 1978). The arrival of the Spanish decimated Native American peoples through disease and changed living conditions, leaving few Gabrielinos by the time ethnographic studies were conducted (Bean and Smith 1978). This makes it difficult to make definitive statements about their culture.

The tribes of the region were organized into patrilineal clans or bands centered on a chief, each of which had its own territorial land or range where food and other resources were collected at different locations throughout the year. Place-names were assigned to each territory, often reflecting common animals, plants, physical landmarks, or cosmological elements that were understood as being related to that location. Marriages were sometimes arranged by parents or guardians, and chiefs occasionally had multiple wives (Bean and Smith 1978).

Shamanism was a major component in tribal life. Shamans, who derived their power through dreams or visions, served individual villages. They cured illness using a variety of tools and plants. Some locations and natural resources were of cultural significance. Springs and other water-related features were thought to be associated with spirits. These resources, often a component of origin stories, had power that came with a variety of risks and properties to those who became affected by them. Mourning ceremonies were similar throughout the region, generally involving and burning of the deceased's possessions, dancing, and ritual wailing, followed by the burning of the deceased's remaining items a year after death (Bean and Smith 1978).

Historic Period Overview

Post-contact history for the State of California is generally divided into three periods: the Spanish Period (1769 to 1821), Mexican Period (1821 to 1848), and American Period (1848 to present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period when California became a territory of the United States.

Spanish Period (1769 to 1821)

Spanish explorers made sailing expeditions along the coast of Southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríguez Cabríllo stopped in 1542 at present-day San Diego Bay. With his crew, Cabríllo explored the shorelines of present Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabríllo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego—a fortified military outpost—as the first Spanish settlement in Alta California. In July of 1769, while Portolá was exploring Southern California, Franciscan Friar Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

The Mission San Luis Rey de Francia at the Luiseño village of Temecula was included in those 21 missions established by the Spanish and the Franciscan Order. In 1819, the Mission San Luis Rey de Francia granted land to Leandro Serrano, the highest locally appointed official (or "mayordomo") of San Antonio de Pala Asistencia, for the Mission of San Luis Rey for Rancho Temescal. In 1828, Serrano was elected as the mayordomo of Mission San Juan Capistrano. From around 1819 until his death in 1852, Serrano built and occupied three separate adobe residences in what is now Riverside County. Serrano's family resided in the third adobe residence until around 1898 (Elderbee 1918).

Mexican Period (1821 to 1848)

In the early 1820s Spain's grip on its expansive subjugated territories began to unravel, which greatly affected the political and national identity of the Southern California territory. Mexico established its independence from Spain in 1821, secured California as a Mexican territory in 1822, and became a federal republic in 1824. After the Mexican independence and the 1833 confiscation of former Mission lands, Juan B. Alvarado became governor of the territory. In 1836, Governor Alvarado began the process of subdividing what is now Riverside and San Bernardino Counties into large ranchos: Rancho Jurupa in 1838; El Rincon in 1839; Rancho San Jacinto Viejo in 1842; Rancho San Jacinto y San Gorgonio in 1843; Ranchos La Laguna, Pauba, and Temecula in 1844; Ranchos Little Temecula and Potreros de San Juan Capistrano in 1845; and Ranchos San Jacinto Sobrante, La Sierra

(Sepulveda), La Sierra (Yorba), Santa Rosa, and San Jacinto Nuevo y Potrero in 1846 (Fitch 1993). While these ranchos were established in documentation, the cultural and commercial developments of the ranchos were punctuated and generally slow with little oversight or assistance from the government in Mexico. On May 22, 1840, Governor Alvarado granted the "11-league" Rancho Jurupa to Don Juan Bandini (Stonehouse 1965).

In 1843, La Placita de los Trujillos, or "La Placita" (also known as "San Salvador" and regionally nicknamed "Spanish Town"), was established in modern-day Riverside County and has been since recognized as one of the first non-native settlements in the San Bernardino Valley (Brown and Boyd 1922). A group of genízaro (Native American slave or servant) colonists from Abiquiú, New Mexico, arrived in the area in the early 1840s (Nostrand 1996). Don Juan Bandini donated a portion of Rancho Jurupa to them on the condition that they would assist in protecting his livestock from Native American raids. Lorenzo Trujillo led 10 of the colonist families to 2,000 acres on the "Bandini Donation" on the southeast bank of the Santa Ana River and formed the village of La Placita. In 1852, the same year that Leandro Serrano died, the Los Angeles County Board of Supervisors established a town called "San Salvador" encompassing a number of small, growing communities in the area initially known as "La Placita." San Salvador was mainly a community of agriculture and animal husbandry until around the late 1860s with the occurrence of "the Great Flood of 1862" and a second flood later in 1886, causing the local population to abandon the immediate area. The area remained largely a ghost town until the recent modern introduction of waste transferal and recycling facilities to the area (Elderbee 1918).

American Period (1848 to Present)

In the late 1840s and early 1850s—after the arrival of a growing European-descended American and other foreign populations, and the conclusion of the Mexican–American war with the Treaty of Guadalupe Hidalgo—issues concerning land rights immediately ensued, with results that often favored newly introduced American interests (Starr 2007; Hale 1888). The California Gold Rush was in full steam by the late 1840s and early 1850s, resulting in a heavy influx of new immigrants from not only across the United States, but also from foreign countries (many from Asia and Latin America). These diverse immigrants changed the dynamics of the local populations. Growth in the region's population was inevitable with the major shifts in the popular social perceptions of potential economic opportunities that California had to offer during the 1850s. The local population growth was further facilitated by the creation of the Temescal Station of the Butterfield Overland Mail Route in 1857 and the organization of the first Temescal School District (Elderbee 1918).

Local History of the Project Site

Riverside County

For a brief time, tin mining was a source of local development in Riverside County. Tin mining had been initiated in the 1850s by Able Stearns, but proved largely unsuccessful; it remained stagnant for years due to litigation disputes that were not settled until 1888 by the U.S. Supreme Court. After the dispute settlement, miners converged on the region, swelling the immediate population while the tin mine enjoyed a 2-year run of operations, closing down for good in 1892 (Elderbee 1918). The growth of the area increased steadily as the economic focus shifted from ranching and animal husbandry to a more fruit orchard/agricultural lifestyle greatly influenced by the region's Mediterranean climate and the introduction of large numbers of honeybees and hives (Elderbee 1918).

In March 1870, John Wesley North issued a circular entitled "A Colony for California" to promote the idea of founding an agriculture-based colony in California. Prospective investors met in Chicago on May 18 of that same year, and the interest expressed led to the formation of the Southern California Colony Association. This success prompted

North to head to Los Angeles, where he arrived on May 26, 1870, initially intending to settle the colony there. However, the association directors decided on Rancho Jurupa along the banks of the Santa Ana River, purchasing it from the California Silk Association in August 1870. North then took up residence on site for the purpose of surveying and developing the colony. He envisioned small-scale farmers growing oranges, lemons, figs, walnuts, olives, almonds, grapes, sweet potatoes, sorghum, and sugar beets (Stonehouse 1965). The community was originally called "Yurupa," but the name was changed to "Riverside" in December of 1870 (Stonehouse 1965; Patterson 1971; Wlodarski 1993). The citrus industry increased dramatically during the 1880s, with promotion of the area shifting to focus on the potential wealth to be had through agriculture (Caltrans 2007).

Of particular note is the introduction of the navel orange to the budding California citrus industry. Two navel orange trees from Brazil's Bahia Province were gifted to Eliza Tibbets, one of the founders of Riverside County, by William Saunders, horticulturalist at the U. S. Department of Agriculture. Mrs. Tibbets and her husband, Luther C. Tibbets, brought the trees to the Riverside colony and planted them in 1873. These parent trees produced sweet-tasting seedless fruits, sparking the interest of local farmers and becoming so popular that the fruits from these trees eventually became known as "Riverside Navel." The fruit's popularity helped establish Riverside as a national leader in cultivating oranges. One of the two original parent Washington navel orange trees is still extant, growing near the intersection of Arlington and Magnolia Avenues. It is "mother to millions of navel orange trees the world over;" the tree is designated as California Historical Landmark No. 20 (Hurt 2014).

North originally intended that the colony would build, own, and operate its own irrigation system, but the desert mesa location made such a venture prohibitively expensive. Thus, the Southern California Company Association joined forces with the Silk Center Association to develop the irrigation project. After completing a canal survey, work began in October 1870 to construct a canal 12 feet wide, narrowing to 8 feet at the base, and 3 feet deep (Stonehouse 1965). With continued growth of the area, a second canal was constructed, and by 1878, the Riverside Canal Company was formed; it was superseded in 1886, due to litigation, by the Riverside Water Company (Bailey 1961). Further growth in the region led to construction of a third major canal, called the Gage Canal, built between 1882 and 1888 (Guinn 1907; Wlodarski 1993). Development of such a stable water supply bolstered the agricultural industry, helping facilitate the booming citrus industry in Riverside County. By 1895, around 20,000 acres of navel orange groves had been planted, and the citrus industry became the primary economic influence for the region well into the turn of the twentieth century (Guinn 1907). This rapid growth of such a vibrant citrus industry led to Riverside County becoming the wealthiest county per capita in the United States by 1895 (March Field Air Museum 2011). The growing citrus industry was in turn stimulated by another major factor that would strongly influence the cultural development of Riverside County: the advent of the railroad, in particular, the transcontinental railroad.

In the later-nineteenth century, the railroad industry began to connect vast swaths of the country with a rail-line transportation system, replacing the previously required extremely slow travel, often with dangerous travel conditions. The initial rail line developed in the region was the California Southern railroad, around 1882, which then connected with the Santa Fe transcontinental line in 1885. In 1887, C.W. Smith and Fred Ferris of the California Southern Railroad, and J.A. Green incorporated the Valley Railway to serve the region. The San Jacinto Valley Railroad was constructed the next year, in 1888; it traveled southeast from Perris, then east across the valley, gradually curving northeast to its terminus at San Jacinto (George and Hamilton 2009). With the combination of rail transportation, the packing industry, and cold storage facilities, Riverside County was able to yield over 0.5 million boxes of oranges by 1890 (Wlodarski 1993).

The towns of Winchester and Hemet were quickly established along the San Jacinto Valley Railroad. The railroad connected the eastern part of the valley to Perris, where it met the California Southern Railroad. This ensured

transportation of valley products to markets in Los Angeles and San Diego. The Hemet–San Jacinto Growers' Association Cannery was located adjacent to the railroad; the canned fruit was loaded directly onto railcars for shipment outside of the valley (George and Hamilton 2009). In addition, many of the ranches that were located along the rail line had their own sidings, where the farm products were directly loaded onto the trains. The railroad also provided passenger service to Los Angeles; however, the construction of modern highways in the 1950s lessened the importance of the railroad. Later, the route was taken over by the Atchison, Topeka, and Santa Fe Railroad, and then the Burlington Northern Santa Fe.

During this time in Southern California history, counties were established, and the area known today as Riverside County was established from portions of Los Angeles County and San Diego Counties. In 1853, the eastern part of Los Angeles County was used to create San Bernardino County. Between 1891 and 1893, several proposals and legislative attempts were put forth to form new counties in Southern California. These proposals included one for a Pomona County and one for a San Jacinto County; however, no proposals were adopted to create Riverside County until the California Board of Commissioners filed the final canvass of the votes and the measure was signed by Governor Henry H. Markham on March 11, 1893.

City of Moreno Valley

The City is an amalgamation of three communities: Moreno, Edgemont, and Sunnymead. After four incorporation attempts, the City was officially incorporated on December 3, 1984, though the area was settled long before that. Moreno, which got its name from the Spanish word for brown, was originally planned as an agricultural community, specifically focused on citrus. Frank Brown, a civil engineer and water company owner, built a water pipeline from Bear Valley to the area in 1891, bringing much needed irrigation to the fledgling agricultural town. After the pipeline was finished, major roads were laid out, and the City began to take shape. March Air Field, originally known as Alessandro Aviation Field, was built in 1918 and represents the first major development in the area. The construction of the airfield brought many more people to the community. After the incorporation of the City in 1984, it experienced its first major population increase, growing from 48,000 at the time of incorporation to over 100,000 in 1990 (Ghori 2014). Today, the City has a population of just over 200,000 people (Data USA 2018).

4.5.1.3 Records Search

Cultural Resources Reports

Dudek conducted a records search at the Eastern Information Center (EIC) for the Project area and a surrounding 1-mile radius on October 10, 2023. The EIC records search and previous archival research revealed that 46 previous cultural resources studies have been conducted within 1 mile of the Project area. Of the 46 previous studies, 3 studies intersect the Project area (Table 4.5-1), covering approximately 90% of the Project area. These studies consist of an archaeological evaluation report, an archaeological survey for the original SP 218, and a Phase I archaeological assessment. None of the previous cultural resource studies identified any resources within the Project area. The results of the records search are included in Confidential Appendix A of the Cultural Resources Report (Appendix F of this Subsequent EIR [SEIR]).

Table 4.5-1. Previous Studies within 1 Mile of the Project Area

Report Number	Authors	Date	Title
Previous Studies Intersecting the Project Area			
RI-02160	Drover, C.E.	1987	Letter Report: Archaeological Evaluation Of Potential Hospital Site In Moreno Valley
N/A	Frank Ritz and Dayle M. Cheever (RECON)	1993	Archaeological Survey For The University Of California, Riverside, Moreno Valley Field Station, Riverside County, California
RI-08802	Bai "Tom" Tang, Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	2012	Phase I Archaeological Assessment: Moreno Master Drainage Plan Revision
Previous Studies Not Intersecting the Project Area			
RI-00137	James F. O'Conell, Philip J. Wilke, Thomas F, King, and Carol L. Mix	1974	Perris Reservoir Archaeology, Late Prehistoric Demographic Change In Southeastern California
RI-00182	Richard A. Weaver	1975	Environmental Impact Evaluation: Archaeology Of Brodiaea Avenue, Pl 984, Water Systems Addition, Riverside County, California
RI-00414	Holcomb, Thomas	1978	Environmental Impact Evaluation: Archaeological Assessment of Two Portions of Land in Moreno Valley, Riverside, California
RI-01665	Wirth Associates	1983	Devers-Serrano-Villa Park Transmission System Supplement to the Cultural Resources Technical Report – Public Review Document and Confidential Appendices
RI-01843	Scientific Resource Surveys, Inc.	1984	Cultural Resource Survey Report On Wolfskill Ranch
RI-01979	Mack, Joanne M. and G.A. Clopine	1986	Archaeological Assessment Of Assessors Parcel # 483-340-005 And 009, Vicinity Of Oliver Street And Alessandro Blvd., Moreno Valley, Riverside County, California
RI-02105	Drover, C.E.	1987	An Archaeological Assessment Of The A.L.T.A. Specific Plan, Moreno Valley, California
RI-02049	McCarthy, Daniel F.	1986	An Archaeological Assessment of 27 Acres of Land Located in the City of Moreno Valley, Riverside, County, California
RI-02171	McCarthy, Daniel F.	1987	Cultural Resources Inventory for the City of Moreno Valley, Riverside County, California
RI-02709	Padon, Beth	1990	Moreno Ranch Studies Archaeological Documentation Of CA-RIV-2994 Moreno Valley, California.
RI-04397	McCarthy, Daniel F.	2000	Archaeological Survey Of Parcel Map 29700, Moreno Valley, Riverside County, California.
RI-05288	White, Laurie	2000	Letter Report: Records Search Results For Sprint PCS Facility RV35XC093D (Golf Course Maintenance), City Of Moreno Valley, Riverside County, CA

Table 4.5-1. Previous Studies within 1 Mile of the Project Area

Report Number	Authors	Date	Title
RI-05296	White, Laurie	2000	Letter Report: Records Search Results For Sprint PCS Facility RV35XC093A (Upper EMWD Water Tank), City Of Moreno Valley, Riverside County, CA
RI-06269	Alexandrowicz, John Stephen	2006	An Historical Resources Identification of Alessandro Point Project, Tract 34681, 25817 Alessandro Boulevard, City of Moreno Valley, Riverside, County, California
RI-06644	Carla Allred	2006	Letter Report; Proposed Cellular Tower Project(s) in Riverside County, California, Site Numbers(S)/Name(S): CA-8393B/ ASHLEY TCNS# 16652
RI-07333	Bonner, Wayne, H. and Marnie Aislin-Kay	2006	Letter Report: Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate IE 24092C, (14375 Nason Street) 14375 Nason Street, Moreno Valley, Riverside County, California
RI-07335	Tetra Tech, Inc.	2007	An Archaeological Survey of 10-Acres (APN 186-280-001) Southeast of the Intersection of Alessandro Boulevard and Lasselle Street, Moreno Valley, Riverside County, California 92555
RI-07573	Sanka, Jennifer M.	2008	Phase I Cultural Resources Assessment and Paleontological Records Review, APN 486-070-007, Moreno Valley, Riverside County, California
RI-07645	Rosenberg, Seth A. and Brian F. Smith	2005	An Archaeological Survey for the Alessandro Plaza Project, City of Moreno Valley, Riverside County, California
RI-08125	Bonner, Wayne and Marnie Aislin-Kay	2008	Letter Report: Cultural Resource Records Search Telecommunications Facility Candidate
RI-08154	Bonner, Wayne and Marnie Aislin-Kay	2008	Letter Report: Cultural Resource Records Search and Site Visit Results For Royal Street Communications Candidate
RI-08266	Madeleine Bray	2009	Negative Survey Of Approximately 25 Acres For The Riverside County Regional Medical Center Expansion Project, City Of Moreno Valley, County Of Riverside, California
RI-08358	Deidre Encarnacion and Daniel Ballester	2010	Identification And Evaluation Of Historic Properties: Moreno Valley Medical Village Project, Assessor's Parcels Nos. 486-290- 001 and -002, City Of Moreno Valley, Riverside County, California
RI-08688	Bonner, Wayne H.	2011	Letter Report: Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate IE24226-A
RI-08802	Tang, Bai "Tom," Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	2012	Phase I Archaeological Assessment: Moreno Master Drainage Plan Revision
RI-08944	Tang, Bai "Tom" and Michael Hogan	2013	Historical/Archaeological Resources Survey Report, Assessor's Parcel No. 486-280-043, City of Moreno Valley, Riverside County, California
RI-08945	Tang, Bai "Tom" and Michael Hogan	2013	Historical/Archaeological Resources Survey Report, Boulder Ridge Family Apartments, City of Moreno Valley, Riverside County, California

Table 4.5-1. Previous Studies within 1 Mile of the Project Area

Report Number	Authors	Date	Title
RI-09209	Greenberg, Gregory P.	2014	Cultural Resources Survey: I Care/CLV5965, 14315 Nason Stret, Moreno Valley, Riverside County, California 92557
RI-09308	Brunzell, David	2014	Cultural Resources Assessment of the Dracaea Project, Moreno Valley, Riverside County, California (BCR Consulting Project No. TRF1401)
RI-09510	Tang, Bai "Tom"	2015	Update to Historical/Archaeological Survey Assessor's Parcel No. 486-280-043 (Rocas Grandes Project) City of Moreno Valley, Riverside County, California CRM Tech Contract No. 2980
RI-09652	Heather R. Puckett	2014	Cultural Resources Summary For The Proposed Verizon Wireless, Inc., Property Site, 27905 John F Kennedy Drive, Moreno Valley, Riverside County, California 92555
RI-09681	Wills, Carrie D. and Sarah A. Williams	2016	Cultural Resources Summary for the proposed Verizon Wireless, Inc., Property Site, 27905 John F Kennedy Drive, Moreno Valley, Riverside County, California 92555
RI-09828	Wilk, Elizabeth	2015	Cultural Resources Records Search and Site Results for T-Mobile West, LLC Candidate IE95361A (Alessandro Substation) 15901 Kitching Street, Moreno Valley, Riverside County, California
RI-09901	Stropes, Tracy A. and Brian F. Smith	2016	Phase I Cultural Resources Survey for the TTM 37060 Project, City of Moreno Valley, County of Riverside
RI-10128	Riordan Goodwin	2017	Cultural Resources Assessment Sater Arco Project City Of Moreno Valley Riverside County, California
RI-10238	Sandy Chandler	2016	Phase I Cultural Resources Assessment For The Mainstreet Skilled Nursing Facility Project, Moreno Valley, California
RI-10466	Lindgren, Kristina	2018	Cultural Resources Investigation Moreno MDP Line H-2 Project Area in the City of Moreno Valley
RI-10700	Perez, Don C.	2015	Cultural Resources Survey Gogh/Ensite #25674 (287941)
RI-10931	Smith, Brain F.	2020	Phase 1 Cultural Resources Survey for the Commercial Center Shell Gas Station Express Car Wash Office Building Project
RI-10988	Duke, Holly, Desiree Martinez, Kim Scott, and Sherri Gust	2018	Cultural and Paleontological Resources Assessment for the Moreno Veach Commercial Center Project, City of Moreno Valley, Riverside County, California
RI-10990	Duke, Holly, Desiree Martinez, Tim Spillane, and Sherri Gust	2018	Cultural Resources Assessment for the Alessandro Boulevard Convenience Store Project, City of Moreno Valley, Riverside County, California
RI-11002	McKenna, Jeanette A	2020	A Phase 1 Cultural Resources Investigation and Paleontological Overview for Tentative Tract Map No. 37858, City of Moreno Valley, Riverside County, California
N/A	Linda Kry and Erica Nicolay	2019	Cultural Resources Phase I Letter Report For The Kaiser Permanente Moreno Valley Medical Center Project, City Of Moreno Valley, Riverside County, California – Negative Findings

Note: N/A = not applicable.

RI-02160

This archaeological evaluation report covers 20 acres of land in Moreno Valley for the Moreno Valley Hospital site by Christopher E. Drover in 1987. The report covers a small portion within the southeastern section of the Project area. The report stated that the Project area had been heavily cultivated and that it was very likely the original ground level was higher than it was during the investigation in 1987. No cultural materials were identified within the Project area and no mitigation was proposed (Drover 1987).

Archaeological Survey for the University of California, Riverside, Moreno Valley Field Station, Riverside County, California

This archaeological inventory report covers the 760-acre property for the original SP 218 conducted by RECON in 1993 (Ritz and Cheever 1993). This 1993 inventory report was relied upon in the 1999 EIR (Appendix F to the 1999 EIR), 2003 Supplemental EIR, and 2005 Addendum. The report covers 90% of the current Project area, as well as areas nearby the Project area to the north, southeast, and southwest that were part of the original SP 218. The 1993 report does not cover 100% of the Project area because the current Project would add one small, 10-acre parcel to the east of the prior Specific Plan Area. The EIC records search and field survey undertaken for the 1993 report resulted in negative results within the Project area. The report noted that the entire property had been used for agricultural activities since it was acquired by University of California, Riverside, as an agricultural field station. Due to the negative surveys and the absence of limitations for seeing the ground surface, no additional work was recommended (Ritz and Cheever 1993).

Previously Recorded Cultural Resources

The EIC records search did not identify any cultural resources within the Project area. The records search did identify 48 cultural resources within 1 mile of the Project area (Table 4.5-2). Of the total 48 resources identified within 1 mile of the Project area, 39 are prehistoric sites (37 bedrock milling sites, 1 rock shelter with midden and bedrock milling, and 1 bedrock milling with a rock circle) and 9 are historic-period resources (1 cistern, residential foundation remains and refuse scatter, 1 well and pump, 2 roads, 3 single-family properties, and 1 historic-period isolate consisting of an irrigation pipe fragment).

Table 4.5-2. Previously Recorded Resources within 1 Mile of the Project Area

Primary Number	Trinomial	Period	Description	Proximity to Project Area
P-33-000482	CA-RIV-000482	Prehistoric	Bedrock milling	Outside
P-33-000483	CA-RIV-000483	Prehistoric	Bedrock milling	Outside
P-33-000484	CA-RIV-000484	Prehistoric	Bedrock milling	Outside
P-33-000485	CA-RIV-000485	Prehistoric	Bedrock milling	Outside
P-33-000532	CA-RIV-000532	Prehistoric	Bedrock milling	Outside
P-33-000533	CA-RIV-000533	Prehistoric	Bedrock milling	Outside
P-33-000534	CA-RIV-000534	Prehistoric	Bedrock milling	Outside
P-33-000535	CA-RIV-000535	Prehistoric	Bedrock milling	Outside
P-33-000536	CA-RIV-000536	Prehistoric	Bedrock milling	Outside
P-33-000537	CA-RIV-000537	Prehistoric	Bedrock milling	Outside
P-33-000538	CA-RIV-000538	Prehistoric	Bedrock milling	Outside
P-33-000539	CA-RIV-000539	Prehistoric	Bedrock milling	Outside

Table 4.5-2. Previously Recorded Resources within 1 Mile of the Project Area

Primary Number	Trinomial	Period	Description	Proximity to Project Area
P-33-000540	CA-RIV-000540	Prehistoric	Bedrock milling	Outside
P-33-000541	CA-RIV-000541	Prehistoric	Bedrock milling	Outside
P-33-000542	CA-RIV-000542	Prehistoric	Bedrock milling	Outside
P-33-000543	CA-RIV-000543	Prehistoric	Bedrock milling	Outside
P-33-000544	CA-RIV-000544	Prehistoric	Rock shelter with a midden and bedrock milling	Outside
P-33-000857	CA-RIV-000857	Prehistoric	Bedrock milling	Outside
P-33-002829	CA-RIV-002829	Prehistoric	Bedrock milling	Outside
P-33-002867	CA-RIV-002867	Prehistoric	Bedrock milling	Outside
P-33-002963	CA-RIV-002963	Prehistoric	Bedrock milling	Outside
P-33-002964	CA-RIV-002964	Prehistoric	Bedrock milling	Outside
P-33-002965	CA-RIV-002965	Prehistoric	Bedrock milling	Outside
P-33-002968	CA-RIV-002968	Prehistoric	Bedrock milling	Outside
P-33-002994	CA-RIV-002994	Prehistoric	Bedrock milling	Outside
P-33-003133	CA-RIV-003133	Prehistoric	Bedrock milling	Outside
P-33-003134	CA-RIV-003134	Prehistoric	Bedrock milling	Outside
P-33-003135	CA-RIV-003135	Prehistoric	Bedrock milling	Outside
P-33-003159	CA-RIV-003159	Prehistoric	Bedrock milling	Outside
P-33-003223	CA-RIV-003223	Prehistoric	Bedrock milling	Outside
P-33-003224	CA-RIV-003224	Prehistoric	Bedrock milling	Outside
P-33-003233	CA-RIV-003233	Prehistoric	Bedrock milling	Outside
P-33-003234	CA-RIV-003234	Prehistoric	Bedrock milling	Outside
P-33-003235	CA-RIV-003235	Prehistoric	Bedrock milling	Outside
P-33-003249	CA-RIV-003249/H	Historic	Cistern	Outside
P-33-003341	CA-RIV-003341	Prehistoric	Bedrock milling	Outside
P-33-003342	CA-RIV-003342	Prehistoric	Bedrock milling	Outside
P-33-004218	CA-RIV-004218	Prehistoric	Bedrock milling	Outside
P-33-007276	N/A	Historic	Single-family property	Outside
P-33-007277	N/A	Historic	Single-family property	Outside
P-33-007290	N/A	Historic	Single-family property	Outside
P-33-013110	CA-RIV-007307	Prehistoric	Bedrock milling and a rock circle	Outside
P-33-015454	N/A	Historic	Residential foundations and refuse scatter	Outside
P-33-016788	N/A	Prehistoric	Bedrock milling	Outside
P-33-019919	N/A	Historic	Well and pump	Outside
P-33-027260	N/A	Historic	Isolate: Fragment of a pre-WWII steel irrigation pipe	Outside
P-33-028580	N/A	Historic	Road: Alessandro Boulevard	Outside
P-33-028581	N/A	Historic	Road: Oliver Street	Outside

Note: N/A = not applicable.

4.5.1.4 Historic Aerial Review

In addition to the EIC records search, Dudek conducted an online review of historic aerial photographs of the Project area and general vicinity to determine the possible development and land use history of the Project area. There were 14 historic aerial photographs of the Project area available from 1966 to 2020 (NETR 2023). The historic aerial from 1966 revealed the Project area to be primarily agricultural land. Four structures and a rectangular water feature are observed on APN 486-280-056, located within the northwestern section of the Project area. Two structures are also observed on APN 486-320-035, located on the eastern section of the Project area. A diagonal water feature is observed in the southeastern section of the Project area. On the 1967 aerial, an additional structure is observed on APN 486-280-056, for a total of five structures on this parcel. On the 1978 aerial, two additional structures are observed on APN 486-280-056, for a total of seven structures on this parcel, and only one of the two structures is observed on APN 486-320-035.

The aerial imagery from 1985 shows no substantial changes to the Project area, while surrounding properties to the north of Cactus Avenue and west of Lasselle Street show increasing residential development. On the 1996 aerial, a hospital structure is observed to the southeast of the Project area. By 1997 the surrounding properties to the west of Lasselle are entirely developed. The 2002 aerial imagery shows Vista del Lago High School to the southwest of the Project area, which was developed as part of the prior project approvals. Between 2002 and 2005, the surrounding properties outside of the Project area continue to steadily increase in development. The aerial imagery from 2009 reveals that the seven structures shown on the 1978 aerial on APN 486-280-056 in the northwestern section of the Project area were demolished and graded, along with the structure located on APN 486-320-035 in the eastern part of the area. In addition, most of the Project area was mass graded, including APNs 486-300-013, 486-300-012, 486-310-035, 486-310-014, 486-320-010, 486-320-011, 486-320-012, and 486-320-009. Only APN 486-522-013, located in the eastern section of the Project area, northeast of the flood control channel, was not mass graded, but by 2010 portions of this parcel exhibited some ground disturbance as evidenced by grading scars. The 2012 imagery shows the early development of Nason Street as the road outline is graded. Aerial imagery between 2014 and 2016 reveal no substantial changes throughout the Project area; however, Nason Street is paved and accessible and the diagonal water feature has been channelized. The 2018 and 2020 aerial images reflect the Project area's current condition. A review of the historic aerials reveals that the Project area has undergone substantial earth movement as it was historically used for agricultural purposes and a majority of the Project area has now been mass graded. In addition, a total of nine historic-age structures used to exist in the Project area but have since been demolished consistent with prior project approvals, and are thus no longer observed on the aerial maps since 2009. No historic-age structures are present within the Project area.

Historic topographic (topo) maps of the Project area were also reviewed, the earliest of which is from 1954. On the 1954 topo map, four blue line streams are observed within the Project area and one structure is observed on APN 486-320-035. On the 1963 topo map, two structures are observed on APN 486-320-035, and the four blue line streams are still observed. On the 1968 topo map, one structure and a well are observed on APN 486-320-035, a rectangular water feature is observed on APN 486-310-014, a square water feature and a well are observed on APN 486-320-009 near the blue line stream, and four structures and a rectangular water feature are observed on APN 486-280-056. The structures are no longer observed on the topo maps from 2012 onward, but the water features are still observed. A review of the historic topo maps reveals that a total of nine historic-age structures used to exist on the Project area but are no longer observed on the topo maps since 2012. No historic-age structures are present within the Project area.

4.5.1.5 Geotechnical Report

ENGEO Inc. completed a baseline geotechnical evaluation for the Project area (Appendix C of this SEIR). The report details the previous geotechnical investigations and the results of three borings, advancing 20 cone penetrometer test soundings, two seismic cone penetrometer tests, and four deep-boring percolation tests completed between March 8 and April 1, 2022, to supplement the previous geotechnical investigations. The borings consisted of 8-inch diameter hollow-stem augers to depths ranging from 51.5 to 53 feet below existing grade.

According to the previous geotechnical investigations completed by Leighton and Associates in 2005, the Project area generally consists of young alluvial fan deposits, young alluvial valley deposits, and very old alluvial fan deposits, ranging from a depth of 0 to 25 feet, capped by a thin layer, approximately 3 to 6 inches thick, of light reddish brown, silty sand with variable amounts of gravel with intermittent deposits of undocumented fill related to agricultural activities (Appendix C). The 2005 geotechnical report also noted the presence of buried and open dump sites in the southeast portion of the Project area on APN 486-310-035, and that the area was used as a dumping site for refuse/household-type waste (Appendix C). The Project area west of Nason Street consists of approximately 20 to 35 feet of dense silty sand, sand with silt, and stiff to very stiff silt and clay, underlain by dense, poorly graded sand and silty sand, and medium stiff to hard clay and silt. The Project area east of Nason Street, generally north and south of the drainage channel, consists of up to 5 feet of dense silty/clayey sand overlaying medium stiff to hard clay and silt (Appendix C).

Portions of the Project area were mass graded under the observation of the previous geotechnical engineer, and the upper 5 feet of the western section of APN 486-300-013, sections of 486-310-035, and 486-620-012 consist of engineered fill. Engineered fill was also observed in the small central sections of APN 486-300-013 and sections of APNs 486-320-009 and 486-310-035; however, the vertical extents are unknown. The subsurface conditions of the dump site areas located on APN 486-310-035 are also unknown. While portions of the Project area were mass graded in 2007, the as-builts plans, testing and observation data, and any documentation regarding the limits of grading were not available (Appendix C). Based on the review of the geotechnical report, most of the Project area has been previously disturbed by mass grading in 2007. Any areas that had the potential to contain alluvial soils were likely graded and replaced with engineered soil. There is accordingly a low potential for subsurface cultural deposits in the Project area.

4.5.1.6 Native American Heritage Commission and Tribal Correspondence

Dudek requested a Native American Heritage Commission (NAHC) search of the Sacred Lands File on February 15, 2023. The Sacred Lands File consists of a database of known Native American resources. These resources may not be included in the EIC database. The NAHC responded on February 22, 2023, with negative results (Appendix B to Appendix F of this SEIR). Additionally, the NAHC provided a list of Native American tribes and individuals/ organizations with traditional geographic associations that might have knowledge of cultural resources in this area.

Tribal outreach letters were mailed on February 24, 2023, to all Native American group representatives included on the NAHC contact list. These letters attempted to solicit information relating to Native American resources that may be impacted by the Project. Native American representatives were requested to define a general area where known resources intersect the Project area. Three responses have been received to date. The Quechan Indian Tribe responded on March 2, 2023, and would like to defer to more local tribes to support their determinations on this matter. The Agua Caliente Band of Cahuilla Indians responded on March 3, 2023, and would like to request copies

of cultural resource documentation, a cultural resources inventory, a copy of the records search, the presence of a qualified archaeologist, and presence of approved Agua Caliente Native American Cultural Resource Monitors during any ground disturbance. The Rincon Band of Luiseño Indians responded March 10, 2023, recommending contacting local tribes as they are closer to the Project area. Additional discussion of tribal outreach is provided in Section 4.18, Tribal Cultural Resources, of this SEIR.

4.5.1.7 Intensive Pedestrian Survey

Qualified Dudek archaeologists conducted a survey of the Project area on March 23, 2023, and March 24, 2023. The survey was conducted to identify and record any cultural resources that may be present using standard archaeological procedures and techniques that meet the Secretary of Interior's standards and guidelines for cultural resources inventory. The survey was conducted for all portions of the Project area with exposed ground surface using north–south transects, where possible, spaced no more than 15 meters apart. In limited visibility sections of the Project area, such as concrete channels, areas inundated with water, and heavy vegetation, transects were not feasible and were not utilized. Instead, a mixed approach (opportunistic survey) was utilized, selectively examining open ground surface where possible. The ground surface was examined for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools), historical artifacts (e.g., metal, glass, ceramics), sediment discolorations that might indicate the presence of a cultural midden, and depressions and other features that might indicate the former presence of buildings/structures.

The Project area is relatively flat and highly disturbed. Ground surface visibility was poor, approximately 0%–10%, as the Project area was densely covered with non-native grasses (Exhibit 1; Exhibits 1 through 4 are located in Appendix F of this SEIR). Portions of the Project area showed evidence of disking, plowing, cutting and filling for drainage, and pads throughout each parcel (Exhibit 2). Other disturbances included irrigation pipes, wells, and utilities, such as sewer pipes (Exhibit 3). Modern debris such as concrete piles were also observed within the Project area (Exhibit 4). Decomposed granite, small gravel, and brown/dark brown alluvial sediments were observed throughout the Project area. No cultural resources were identified during the pedestrian survey.

4.5.2 Regulatory Framework

Federal

There are no federal regulations regarding cultural resources that apply to the Project.

State

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological and historic resources:

1. California Public Resources Code, Section 21083.2(g): Defines "unique archaeological resource."
2. California Public Resources Code, Section 21084.1 and CEQA Guidelines Section 15064.5(a): Define historical resources. In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource;" it also defines the circumstances when a project would materially impair the significance of a historical resource.

3. California Public Resources Code, Section 5097.98 and CEQA Guidelines Section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
4. California Public Resources Code, Sections 21083.2(b–c) and CEQA Guidelines Section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5[b]). If a site is either listed or eligible for listing in the California Register of Historic Resources (CRHR), or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1[q]), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; 14 CCR 15064.5[a]). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; 14 CCR 15064.5[a]).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14 CCR 15064.5[b][1]; PRC Section 5020.1[q]). In turn, the significance of a historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any historical resources, then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2[a]–[c]).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria (PRC Section 21083.2[g]):

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts on non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2[a]; 14 CCR 15064.5[c][4]). However, if a non-unique archaeological resource qualifies as a TCR (PRC Sections 21074[c] and 21083.2[h]), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in PRC Section 5097.98.

California Register of Historic Resources (California Public Resources Code, Section 5020 et seq.)

Under CEQA, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC Section 5020.1[j]). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following National Register of Historic Places criteria (PRC Section 5024.1[c]):

- Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history.

Resources less than 50 years old are not considered for listing in the CRHR but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the National Register of Historic Places, and properties listed or formally designated as eligible for listing on the National Register of Historic Places are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

Assembly Bill 52

AB 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that TCRs must be considered under CEQA and provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American tribe and that is either:

- On or determined to be eligible for the California Register of Historical Resources or a local historic register; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with a project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or EIR.

Section 1(a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to TCRs, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

Senate Bill 18

The Local and Tribal Intergovernmental Consultation process, commonly known as SB 18, was signed into law September 2004 and took effect March 1, 2005. SB 18 refers to PRC Sections 5097.9 and 5097.995, which defines cultural places as:

- Native American sanctified cemetery place of worship, religious or ceremonial site, or sacred shrine (PRC Section 5097.9).
- Native American historic, cultural, or sacred site that is listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, any archaeological or historic site (PRC Section 5097.993).

SB 18 established responsibilities for local governments to contact, provide notice to, refer plans to, and consult with California Native American tribes that have been identified by the NAHC and if that tribe requests consultation after local government outreach as stipulated in Government Code Section 65352.3. The purpose of this consultation process is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural place in any subsequent project. The consultation is required whenever a general plan, specific plan, or open space designation is proposed for adoption or to be amended. Once local governments have sent notification, tribes are responsible for requesting consultation. Pursuant to Government Code Section 65352.3(a)(2), each tribe has 90 days from the date on which they receive notification to respond and request consultation.

In addition to the requirements stipulated previously, SB 18 amended Government Code Section 65560 to "allow the protection of cultural places in open space element of the general plan" and amended Civil Code Section 815.3 to add "California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places."

California Public Resources Code Section 5097-5097.6

PRC Sections 5097–5097.6 provide that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands is a misdemeanor. These sections prohibit the knowing destruction of objects of antiquity without a permit (express permission) on public lands and provide for criminal sanctions. This section was amended in 1987 to require consultation with the NAHC whenever Native American graves are found. Violations that involve taking or possessing remains or artifacts are felonies.

PRC Section 5097.5, states that "no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historic feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands."

California Health and Safety Code, Section 7050.5, and California Public Resources Code, Section 5097.98

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Health and Safety Code Section 7050.5 and PRC Section 5097.98.

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code Section 7050.5[b]). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (California Health and Safety Code Section 7050.5[c]). In accordance with PRC Section 5097.98(a), the NAHC will notify the most likely descendant. With the permission of the landowner, the most likely descendant may inspect the site of discovery. Within 48 hours of being granted access to the site, the most likely descendant may recommend means of treatment or disposition, with appropriate dignity, of the human remains and associated grave goods.

Native American Historic Cultural Sites (California Public Resources Code, Section 5097 et seq.)

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act, enacted in 2001, required all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The act also provides a process for the identification and repatriation of these items to the appropriate tribes.

Local

City of Moreno Valley General Plan

The City of Moreno Valley General Plan 2040's Land Use and Community Character Element (Chapter 2) and Open Space and Resource Conservation Element (Chapter 10) include the following goals and policies related to cultural resources (City of Moreno Valley 2021):

Policy LCC.3-10: Balance the preservation of historic resources with the desire of property owners of historic structures to adopt energy efficient strategies.

Policy LCC.3-11: Require any application that would alter or demolish an undesignated and unsurveyed resource over 50-years-old to be assessed on the merits of the structure.

Goal OSRC-2: Preserve and respect Moreno Valley's unique cultural and scenic resources, recognizing their contribution to local character and sense of place.

Policy OSRC 2-8: Require cultural resource assessments prior to the approval of development proposals on properties located in archaeologically sensitive areas.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Specific Plan Amendment (Appendix A of this SEIR).

4.5.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the Project would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
3. Disturb any human remains, including those interred outside of dedicated cemeteries.

4.5.4 Impact Analysis

4.5.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR identified no archaeological, historical, or cultural sites or significant features in the Project area. An archaeological and historical survey was conducted by RECON in October 1992 for the Specific Plan Area, which found the entire area had been disturbed by agricultural activities. The 1999 EIR stated the potential for significant cultural resources occurring on the property would be low. Impacts to cultural resources were found to be less than significant.

Mitigation

No mitigation was required.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR did not discuss impacts to cultural resources.

Mitigation

No additional mitigation was required.

2005 Addendum

Analysis

The 2005 Addendum found the impacts from the 2005 Aquabella SPA would be consistent with the 1999 EIR. The City established procedures that would also mitigate any impacts to unknown cultural resources discovered during grading.

Mitigation

No additional mitigation was required.

4.5.4.2 Project Impact Analysis

Threshold 1: Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

A review of the historic aerials, topo maps, previous survey reports, and updated surveys shows that no historic-age structures or other historic-age resources are present within the Project area. The historic aerials show that the Project area was historically used for agricultural purposes and most of the Project area was mass graded in the early 2000s. While nine structures used to exist in the Project area, as observed on topo maps from 1954, 1963,

and 1968, the structures were previously demolished pursuant to prior permits and approvals. No structures are observed on aerial maps of the Project area beginning in 2009, and no structures appear on the topo maps beginning in 2012.

The records searches and pedestrian surveys did not identify historic resources in the Project area. Thus, no new or more severe significant impacts would result from the Project beyond those discussed in prior CEQA analyses. As no historic-age structures or other historic-age resources are present within the Project area, **no impact** to a historical resource as defined in CEQA Guidelines Section 15064.5 would occur.

Threshold 2: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

The 1999 EIR identified no archaeological, historical, or cultural sites or significant features based on the prior agricultural use of the Project area, prior EIC records searches (1987 and 1992), and archaeological surveys of the site completed in 1987 and 1993 on the Field Station property. The Project area had been extensively disturbed by agricultural activities since it was acquired by the University of California, Riverside, as an agricultural field station and was considered to have low sensitivity for cultural resources (Ritz and Cheever 1993). It was noted that the Project area had been heavily cultivated and it was likely that the original ground level was higher than it was during the survey in 1987 (Drover 1987). No significant impact to archaeological resources was identified.

The City issued a grading permit (Permit No. MV-0826, Project No. PM-33532) for the site in 2007, which resulted in approximately 66% of the Project area being graded to a depth of between 5 and 10 feet. The California Department of Fish and Wildlife, Regional Water Quality Control Board, and U.S. Army Corps of Engineers issued regulatory permits (Notification No. 1600-2005-0146-R6 and Reference No. 200501583) for the 2005 Aquabella SPA in 2006. The flood control channel, adjacent earthen channel, and Nason Street were constructed and drainage facilities were installed along Cactus Avenue and Nason Street and within the Project area. No archaeological or cultural resources were identified during those ground disturbing activities.

Updated records searches and pedestrian surveys did not result in the identification of archaeological or cultural resources in the Project area and continue to indicate that there is low sensitivity for identifying intact subsurface cultural resource deposits during Project implementation. The EIC records search results from October 10, 2023, did not identify any cultural resources within the Project area. Additionally, an intensive pedestrian survey in 2023 did not identify any cultural resources within the Project area. Archival research and a review of aerial photographs reveal that the Project area has been extensively disturbed by past agricultural and grading activities. Further, any archaeological resources that were potentially present at one time have likely been disturbed by years of continuous agricultural activities, mass grading, installation of flood control and drainage structures, and Nason Street construction. It is unlikely archaeological resources would remain intact given this substantial site disturbance. Accordingly, no new or more severe significant impacts would result from the Project beyond those discussed in prior CEQA analyses. Impacts to archaeological resources as defined in CEQA Guidelines Section 15064.5 would be less than significant; however, while there is an extremely low potential to encounter previously unidentified subsurface cultural/archaeological deposits, as yet unknown cultural resources could be encountered. Impacts would therefore be considered **potentially significant**.

Threshold 3: Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?

No known human remains have been identified at the Project area. Archival research and an updated pedestrian survey did not reveal any potential to disturb human remains in the Project area. The Project area has been extensively disturbed by agricultural use, mass grading, and infrastructure improvements. The Project area has never been used as a formal cemetery. Thus, no new or more severe significant impacts would result from the Project beyond those discussed in prior CEQA documents, and impacts to human remains, including those interred outside of formal cemeteries, would be considered less than significant**.** However, while the possibility to disturb human remains is extremely low, as yet unknown human remains could be encountered. Impacts would therefore be considered **potentially significant.**

4.5.5 Significance of Impacts Before Mitigation

Threshold 1: Historic Resources

The Project would result in **no impacts** to historic resources.

Threshold 2: Archaeological Resources

The Project would result in **potentially significant impacts** to archaeological resources.

Threshold 3: Human Remains

The Project would result in **potentially significant impacts** related to the discovery of human remains.

4.5.6 Mitigation Measures

4.5.6.1 Previously Adopted Mitigation Measures

1999 EIR

No mitigation was required.

2003 Supplemental EIR

No mitigation was required.

2005 Addendum

No mitigation was required.

4.5.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

The following measures would ensure proper treatment of subsurface archaeological resources and unrecorded human remains should they be encountered in the Project area, ensuring impacts would be less than significant:

MM-CUL-1 Archaeologist Retained. Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project archeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager, and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training for those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis.

MM-CUL-2 Native-American Monitoring. Prior to the issuance of a grading permit, the Developer shall secure agreements with the Consulting Tribes for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth-moving activities in the affected area in the event that suspected archaeological resources are unearthed.

MM-CUL-3 Cultural Resource Monitoring Plan (CRMP). Prior to the issuance of the grading permit, a Cultural Resource Monitoring Plan (CRMP) is to be developed and approved. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a CRMP in consultation pursuant to the definition in AB52 to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting Tribe is defined as a Tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

a. Project description and location
b. Project grading and development schedule;
c. Roles and responsibilities of individuals on the Project;
d. The pre-grading meeting and Cultural Resources Worker Sensitivity Training details;
e. The protocols and stipulations that the contractor, City, Consulting Tribe (s) and Project archaeologist will follow in the event of inadvertent cultural resource discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resource's evaluation.

f. The type of recordation needed for inadvertent finds and the stipulations of recordation of sacred items.
g. Contact information of relevant individuals for the Project.

MM-CUL-4 Grading Note. The City shall verify that the following note is included in the Grading Plan: "If any suspected archaeological resources are discovered during ground–disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."

MM-CUL-5 Inadvertent Finds. If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to Project approval, the following procedures shall be followed. Unique cultural resources are defined, for this condition only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Native American Tribe(s). Tribal cultural resources are excluded from the definition of unique cultural resources as those resources are defined by the tribal values ascribed to them by their affiliated communities. Treatment of tribal cultural resources inadvertently discovered during the project's ground-disturbing activities shall be subject to the consultation process required by state law and AB 52.

i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the Project Applicant, the Project Archaeologist, the Tribal Representative(s), and the City to discuss the significance of the find.

ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Tribal Representative(s) and the Project Archaeologist, a decision shall be made, with the concurrence of the City, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.

iii. Further ground disturbance, including but not limited to grading, trenching, etc., shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal Monitors if needed.

iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils, and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition/Mitigation Measures.

v. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the Project Archeologist, in consultation

with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.

vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Project Applicant and the Tribe(s) cannot agree on the significance or the mitigation of the archaeological or cultural resources, these issues will be presented to the City for decision. The City shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, and recommendations of the project archeologist and shall consider the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City shall be appealable to the City Planning Commission and/or City Council. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to the City of Moreno Valley upon the completion of a treatment plan and final report detailing the significance and treatment finding.

MM-CUL-6 Final Disposition. In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for the final disposition of the discoveries: a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley:

i. Preservation-in-place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.

ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with the exception that sacred items, burial goods, and Native American human remains are excluded. Any reburial process shall be culturally appropriate. The listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Requests.

iii. If preservation in place or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid shall be provided by the landowner to the City. There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning findings of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found,

shall be provided to the City of Moreno Valley upon the completion of a treatment plan and final report detailing the significance and treatment finding.

MM-CUL-7 Human Remains. If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to the origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

MM-CUL-8 Non-Disclosure. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 7927.000, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 7927.000.

MM-CUL-9 Phase IV Report. Prior to the final inspection, the Project Archeologist is to submit two (2) copies of the Phase IV Cultural Resources Monitoring Report that complies with the Planning Department's requirements for such reports. The Phase IV report shall include evidence of the required cultural/historical sensitivity training for the construction staff held during the pre-grade meeting. The City shall review the reports to determine adequate mitigation compliance. Provided the reports are adequate, the City shall clear this condition. Once the report(s) are determined to be adequate, two (2) copies shall be submitted to the Eastern Information Center (EIC) at the University of California Riverside (UCR) and one (1) copy shall be submitted to the Pechanga Cultural Resources Department, and Consulting Tribe(s) if requested.

4.5.7 Significance of Impacts after Mitigation

Threshold 1: Historic Resources

The Project would have **no impact** on historic resources.

Threshold 2: Archaeological Resources

Mitigation Measure (MM) CUL-1 through **MM-CUL-6** and **MM-CUL-9** would be implemented to ensure proper treatment should unknown archaeological resources be discovered. With **MM-CUL-1** through **MM-CUL-6** and **MM-CUL-9,** impacts would be **less than significant with mitigation**.

Threshold 3: Human Remains

Implementation of **MM-CUL-7** and **MM-CUL-8** would ensure proper treatment of human remains if discovered during grading, in compliance with California Health and Safety Code Section 7050.5. With implementation of **MM-CUL-7** and **MM-CUL-8**, impacts would be **less than significant with mitigation**.

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4.6 Energy

This section describes the existing energy conditions related to the Aquabella Specific Plan Amendment (Project) site and vicinity, identifies regulatory requirements associated with energy consumption, and evaluates potential energy-related impacts of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). At the time of the 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as well as the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), which modified the 1999 EIR, evaluation of energy impacts was not a separately required criterion under the California Environmental Quality Act (CEQA). Therefore, the impacts of project-related construction and operational energy use were not subject to a significance determination, but were qualitatively evaluated in the 1999 EIR and the 2003 Supplemental EIR as part of the air quality and significant irreversible changes analyses. These analyses found that energy-related air quality impacts would be less than significant, and the previously approved projects would result in the long-term irreversible commitment of energy resources from non-renewable fossil fuels (City of Moreno Valley 1999b, 2003). The 2005 Addendum found that impacts associated with energy would be consistent with the 1999 EIR (City of Moreno Valley 2005b).

The following analysis of the Project's potential impacts related to energy is based predominantly on the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report prepared by Dudek for the Project site (Appendix D of this Subsequent EIR).

4.6.1 Existing Environmental Conditions

Electricity

According to the U.S. Energy Information Administration, California used approximately 247,249,865 megawatt-hours of electricity in 2021 (EIA 2022a). Electricity usage in California for different land uses varies substantially based on the types of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawai'i (EIA 2023a).

Moreno Valley Electric Utility (MVU) would provide electricity to the Project. MVU is a public power utility, providing electricity to over 6,500 customers within its service area (MVU 2023). According to the 2022 MVU Power Content Label, solar energy accounts for 33.4% of MVU's overall energy resources (MVU 2023). In the City of Moreno Valley (City), MVU reported an annual electrical consumption of approximately 214 million kilowatt-hours in 2022, with the majority going to commercial uses (136 million kilowatt-hours) (CEC 2023a).

Natural Gas

According to the U.S. Energy Information Administration, California used approximately 2,056,267 million cubic feet of natural gas in 2022 (EIA 2023b). The majority of California's natural gas customers are residential and small commercial customers (core customers). These customers account for approximately 35% of the natural gas delivered by California utilities (CPUC 2021). Large consumers, such as electric generators and industrial customers (noncore customers), account for approximately 65% of the natural gas delivered by California utilities (CPUC 2021).

The California Public Utilities Commission (CPUC) regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. California gas utilities may soon also begin receiving biogas into their pipeline systems (CPUC 2022).

The Southern California Gas Company (SoCalGas) provides Riverside County (including the City) with natural gas service. SoCalGas's service territory encompasses approximately 20,000 square miles and more than 500 communities. In the California energy demand mid-energy demand scenario, natural gas demand is projected to have an annual growth rate of 0.03% in SoCalGas's service territory. The total capacity of natural gas available to SoCalGas in 2020 is estimated to be 3.8 billion cubic feet per day. In 2024, the total capacity available is also estimated to be 3.8 billion cubic feet per day[1] (California Gas and Electric Utilities 2020). This amount is approximately equivalent to 3.88 billion thousand British thermal units (kBTU) per day or 38.8 million therms per day. In 2022, SoCalGas delivered approximately 431 million therms (43.1 billion kBTU) to Riverside County (CEC 2023b).

Petroleum

According to the U.S. Energy Information Administration, California used approximately 605 million barrels of petroleum in 2021, with the majority (511 million barrels) used for the transportation sector (EIA 2023c). There are 42 U.S. gallons in a barrel, so this equates to a total daily use of approximately 14.4 million gallons of petroleum among all sectors and 12.2 million gallons for the transportation sector. In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in the "State" subsection in Section 4.6.2, Regulatory Framework, as well as Section 4.8, Greenhouse Gas Emissions.

4.6.2 Regulatory Framework

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act (42 USC 6272–6273, 6294), which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Policy Act of 2005

In January 2005 the Energy Policy Act (42 USC 15801) was signed into law. It addresses energy production in the United States, including energy efficiency; renewable energy; oil and gas; coal; tribal energy; nuclear matters and security; vehicles and motor fuels, including ethanol; hydrogen; electricity; energy tax incentives; hydropower and

[1] One cubic foot of natural gas has approximately 1,020 BTUs of natural gas or 1.02 kBTUs of natural gas.

geothermal energy; and climate change technology. The Energy Policy Act provides loan guarantees for entities that develop or use innovative technologies that avoid the by-production of greenhouse gases (GHGs). Another provision of the Energy Policy Act is the Renewable Fuel Standard (RFS), which increases the amount of biofuel that must be mixed with gasoline sold in the United States.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) (42 USC 152) was signed into law. In addition to setting increased corporate average fuel economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- RFS (Section 202)
- Appliance and lighting efficiency standards (Sections 301–325)
- Building energy efficiency (Sections 411–441)

This federal legislation (the RFS) requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2022). The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of our nation's renewable fuels sector. The updated program ("RFS2") includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century was signed into law in 1998 and builds on the initiatives established in the Intermodal Surface Transportation Efficiency Act legislation. The Transportation Equity Act authorizes highway, highway safety, transit, and other efficient surface transportation programs. The act continues the program structure established for highways and transit under Intermodal Surface Transportation Efficiency Act, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong

planning process as the foundation of transportation decisions. The Transportation Equity Act also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of intelligent transportation systems to help improve operations and management of transportation systems and vehicle safety.

Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (Infrastructure Deal) was signed into law November 15, 2021. The legislation includes $39 billion of new investment to modernize transit, in addition to continuing the existing transit programs for 5 years as part of surface transportation reauthorization. The Infrastructure Deal would also invest $7.5 billion to build out a national network of electric vehicle (EV) chargers. The Infrastructure Deal would provide funding for deployment of EV chargers along highway corridors to facilitate long-distance travel and within communities to provide convenient charging where people live, work, and shop to support a goal of building a nationwide network of 500,000 EV chargers. This would accelerate the adoption of EVs, which would help reduce emissions and improve air quality. In addition, the Infrastructure Deal would include more than $65 billion of investments in clean energy transmission including upgrading existing power infrastructure through expanding transmission lines to facilitate the expansion of renewables and clean energy.

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The act includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the United States by 40% as compared to 2005 levels by 2030. The act allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles, and includes measures that will make homes more energy efficient.

State

Warren-Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974 (California Public Resources Code, Section 25001), which created the California Energy Commission (CEC). The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and the CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies,

strategies, and actions for California's consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and the CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32 (California Public Resources Code, Sections 25310 and 25943[f]), the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Assembly Bill 1007

AB 1007 (2005) required CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan) (California Labor Code, Section 144.9). CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with other state agencies, plus federal and local agencies. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

California Code of Regulations, Title 24, Part 6

The California Building Standards Code was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every 3 years by the Building Standards Commission and CEC and revised if necessary (California Public Resources Code Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, to "reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code Section 25402[d]) and cost effectiveness (California Public Resources Code Section 25402[b][2–3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The current Title 24, Part 6 standards, referred to as the 2022 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2023. The 2022 energy code focuses on four key areas in newly constructed homes and businesses quality (CEC 2021):

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking, and EV charging options whenever they choose to adopt those technologies.
- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available on site and complement the state's progress toward a 100% clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

California Code of Regulations, Title 24, Part 11

In addition to CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24), which is commonly referred to as CALGreen, establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. CALGreen took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals.

The 2022 CALGreen standards are the current applicable standards. For residential projects, some of the key mandatory CALGreen standards involve requirements related to EV parking spaces and charging infrastructure, indoor and outdoor water efficiency and conservation, construction waste management, low volatile organic compound paints and finishes, and formaldehyde limits in wood products (24 CCR, Part 11). For nonresidential projects, some of the key mandatory CALGreen standards involve requirements related to bicycle parking, designated parking for clean air vehicles, EV charging stations for passenger vehicles, shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR, Part 11).

California Code of Regulations, Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency (20 CCR 1401–1410). CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Senate Bill 1078, Senate Bill 1368, Executive Order S-14-08, Executive Order S-21-09 and Senate Bill X1-2, Senate Bill 350, Senate Bill 100, and Senate Bill 1020

Senate Bill (SB) 1078 (2002) (California Public Utilities Code Section 399.11 et seq.) established the Renewables Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 1078, Executive Order [EO] S-14-08, and EO S-21-09).

SB 1368 (2006) required CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities (California Public Utilities Code Section 8340-8341). These standards must be consistent with the standards adopted by CPUC.

EO S-14-08 (2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. California Natural Resources Agency, in collaboration with CEC and the California Department of Fish and Wildlife, was directed to lead this effort.

EO S-21-09 (2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with CPUC and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health, as well as those that can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard; however, this regulation was not finalized because of subsequent legislation (SB X1-2) signed by Governor Brown in April 2011 (California Public Resources Code, Section 25354[l]).

SB X1-2 (April 2011) expanded RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current and that meets other specified requirements with respect to its location. SB X1-2 applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All these entities must meet the renewable energy goals listed above.

SB 350 (2015) further expanded the RPS program by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030 (California Public Utilities Code, Section 454.51). In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires CPUC, in consultation with CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100 (2018) increased the standards set forth in SB 350, establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024; 52% by December 31, 2027; and 60% by December 31, 2030, be secured from qualifying renewable energy sources (California Public Utilities Code, Sections 399.11, 399.15, 399.30). SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers to come from eligible renewable energy resources and zero-carbon resources: 90% by December 31, 2035; 95% by December 31, 2040; and 100% by December 31, 2045 (California Government Code, Section 7921.505; California Health and Safety Code, Section 38561; California Public Utilities Code, Sections 454.53, 583, 454.59, and 739.13).

State Vehicle Standards (Assembly Bill 1493 and Executive Order B-16-12)

AB 1493 (July 2002) was enacted in a response to the transportation sector accounting for a large share of California's carbon dioxide (CO_2) emissions (California Health and Safety Code, Section 43018.5). AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004.

EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles (ZEVs). It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 identified a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

EPA and National Highway Traffic Safety Administration approved the SAFE Vehicles Rule Part One and Two, which revoked California's authority to set its own GHG emissions standards and set ZEV mandates in California. However, in March 2022, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and ZEV sales mandate. EPA's action concludes its reconsideration of the 2019 SAFE-1 rule by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

Senate Bill 375

SB 375 (California Government Code Section 65080) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG-reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires the state's 18 regional metropolitan planning organizations to prepare a sustainable communities strategy as part of their regional transportation plan that will achieve the GHG-reduction targets set by CARB. If a metropolitan planning organization is unable to devise a sustainable communities strategy to achieve the GHG-reduction target, the metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG-reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

A sustainable communities strategy does not (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it (California Government Code Section 65080[b][2][K]). Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars (ACC) I program (CARB 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the low-emission vehicle regulation for criteria air pollutant and

GHG emissions and a technology forcing regulation for ZEVs that contributes to both types of emission reductions (CARB 2012). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75% less smog-forming pollution than the average new car sold in 2015. The ZEV program will act as the focused technology of the ACC I program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018 to 2025 model years.

The ACC II program, which was adopted in August 2022, established the next set of low-emission vehicle and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2022). The main objectives of ACC II are as follows:

- Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
- Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

The ACC II rulemaking package also considers technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts.

Executive Order N-79-20

EO N-79-20 (September 2020) requires CARB to develop regulations as follows: (1) Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the state towards the target of 100% of in-state sales by 2035; (2) medium- and heavy-duty vehicle regulations requiring increasing volumes of new zero-emission trucks and buses sold and operated in the state towards the target of 100% of the fleet transitioning to ZEVs by 2045 everywhere feasible and for all drayage trucks to be zero emission by 2035; and (3) strategies, in coordination with other state agencies, EPA, and local air districts, to achieve 100% zero emissions from off-road vehicles and equipment operations in the state by 2035. EO N-79-20 called for the development of a ZEV Market Development Strategy, adopted by the California Governor's Office of Business and Economic Development, which was released February 2021, to be updated every 3 years, that ensures coordination and implementation of the EO and outlines actions to support new and used ZEV markets. In addition, the EO specifies identification of near-term actions and investment strategies to improve clean transportation, sustainable freight, and transit options and calls for development of strategies, recommendations, and actions by July 15, 2021, to manage and expedite the responsible closure and remediation of former oil extraction sites as the state transitions to a carbon-neutral economy.

Local

City of Moreno Valley General Plan 2040

The City adopted the City of Moreno Valley General Plan 2040 on June 15, 2021 (City of Moreno Valley 2021).[2] Applicable goals and policies related to energy include the following:

Parks and Public Services

Policy PPS.1-4: Design and construct parks, public spaces and recreational facilities for flexible use, energy efficiency, adaptability over time, and ease of maintenance.

Policy PPS.4-5: Facilitate installation of advanced technology infrastructure, including, but not limited to, infrastructure for highspeed internet access and solar energy.

Safety Element

Policy S.2-F: Evaluate options for ensuring emergency power at critical and community facilities, including microgrids, solar capture and storage, distributed energy, and back-up generators. Consider the ability to reduce utility costs and carbon emissions in the assessment.

Policy S.3-2: Partner with local utilities, regional agencies, and local jurisdictions to assess the vulnerability of energy infrastructure and identify improvements that increase resilience of local energy infrastructure.

Policy S.3-6: Encourage the use of landscaping, building materials, and site design techniques that provide passive cooling and reduce energy demand. In particular, promote the use of voluntary measures identified in the California Green Building Code (Title 24, Part 11 of the California Code of Regulations) to minimize heat island effects, including hardscape and roof materials with beneficial solar reflectance and thermal emittance values and measures for exterior wall shading.

Open Space and Resource Conservation Element

Goal OSRC-3: Use energy and water wisely and promote reduced consumption.

Policy OSRC-3-1: Promote energy conservation throughout the community and encourage the use of renewable energy systems and technologies to supplement or replace traditional building energy systems.

[2] The 2040 General Plan was effective immediately upon adoption in June 2021, superseding the City's 2006 General Plan. However, in July 2021, an environmental group filed a lawsuit challenging the City's adoption of its 2040 General Plan, including the changes to the Zoning Ordinance (Ord. No. 981, adopted Aug. 3, 2021), its Housing Element Update, its Climate Action Plan, and certification of its EIR for alleged violations of CEQA (*Sierra Club v. City of Moreno Valley, et al*., Riverside County Superior Court Case No. CVRI12103300). In light of the litigation explained herein, a consistency analysis of the 2006 General Plan is also included in the Specific Plan Amendment (Appendix A to this SEIR).

Policy OSRC-3-2: Participate in regional energy efficiency financing programs such as low-interest revolving loan funds, the California Comprehensive Residential Building Retrofit Program, and California First that enable property owners to obtain low-interest financing for energy improvements.

Policy OSRC-3-3: Promote energy and water use awareness community-wide by informing the community regarding energy audits and incentive programs (tax credits, rebates, exchanges, etc.) available for energy conservation as well as water conservation techniques, services, devices, and rebates.

Policy OSRC-3-4: Continue to implement energy and water conservation measures in City facilities and operations.

Policy OSRC-3-A: Use the Climate Action Plan to help guide energy and water reduction efforts.

Policy OSRC-3-B: Connect businesses and residents with voluntary programs that provide free or low-cost energy and water efficiency audits, retrofit installations, rebates, and financing by publishing information on the City's website.

Policy OSRC-3-C: Seek funding programs to assist low and moderate-income households in energy conservation.

Policy OSRC-3-D: Encourage City employees to submit energy efficiency and conservation recommendations for City operations and follow up on the recommendations.

Policy OSRC-3-E: Periodically review and update City plans, resolutions, and ordinances to promote greater energy efficiency in both existing and new construction in regard to site planning, architecture, and landscape design.

Land Use and Community Character Element

Policy LCC.4-5: Encourage the use of innovative and cost-effective building materials, site design practices and energy and water conservation measures to conserve resources and reduce the cost of residential development.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

4.6.3 Significance Criteria

Thresholds of Significance

The significance criteria used to evaluate the Project impacts to energy are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to energy would occur if the Project would:

1. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation.

2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Approach and Methodology

Project Design Features

The Project would implement project design features (PDFs) intended to reduce energy consumption. The Project would also implement PDFs that reduce other potential environmental impacts, such as those relating to vehicle miles traveled (VMT), and thereby achieve direct or indirect energy co-benefits. For the full text of each PDF, please refer to Section 4.8. Table 4.6-1 explains whether the PDFs are incorporated in this analysis as a quantitative feature or a qualitative/supporting feature (that is, energy reductions not estimated in this analysis).

Table 4.6-1. Project Design Features and Reduction Accounting in Energy Estimates

PDF Number and Name	Quantitative or Qualitative/Supporting Measure?
PDF-AQ/GHG-1: Electric Vehicle Charging Infrastructure	Quantitative
PDF-AQ/GHG-2: No Wood-Burning Fireplaces or Stoves and No Natural Gas Fireplaces	Quantitative
PDF-AQ/GHG-3: Require All-Electric Development	Quantitative
PDF-AQ/GHG-4: Provision of Rooftop Solar	Quantitative
PDF-AQ/GHG-5: LED Lighting	Qualitative/supporting
PDF-AQ/GHG-6: Energy Efficient Appliances	Quantitative
PDF-AQ/GHG-7: Energy Smart Meters	Qualitative/supporting
PDF-AQ/GHG-8: Cool Pavements	Qualitative/supporting
PDF-AQ/GHG-9: Solid Waste Reduction	Qualitative/supporting
PDF-AQ/GHG-10: Establish a Local Farmer's Market.	Qualitative/supporting
PDF-AQ/GHG-11: Tree Planting	Quantitative
PDF-AQ/GHG-12: Water Use Efficiency and Conservation Plan	Partially Quantitative. Quantitative energy reductions estimated in energy as incorporated into the Project-specific energy use estimates. However, water use reductions associated with this feature were limited to the residential land uses; all other land uses' water use were not adjusted to account for water efficient features
PDF-AQ/GHG-13: Use Recycled Water for Irrigation	Quantitative
PDF-AQ/GHG-14: Use of Local Well Water for Lake	Quantitative
PDF-AQ/GHG-15: Integrated Stormwater System	Qualitative/supporting
PDF-TRANS-1: Community-Based Travel Planning	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-2: Unbundle Residential Parking Costs from Property Costs	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-3: Commute Trip Reduction (CTR) Program Marketing	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-4: Rideshare Program	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-5: End-of-Trip Bicycle Facilities	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates

Table 4.6-1. Project Design Features and Reduction Accounting in Energy Estimates

PDF Number and Name	Quantitative or Qualitative/Supporting Measure?
PDF-TRANS-6: Discounted Transit Program for Work Trips	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-7: Non-Electric Bikeshare Program:	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates.
PDF-TRANS-8: Electric Scootershare Program	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-9: Extend Transit Network Coverage	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-10: Increase Transit Service Frequency	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-11: Implement Bus Rapid Transit (BRT):	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-12: Mobility Hub	Quantitative. Energy reductions estimated as incorporated into the Project-specific VMT estimates
PDF-TRANS-13: Electric Bikeshare Program	Qualitative/supporting
PDF-TRANS-14: Provide Shuttle Service to Employment Centers	Qualitative/supporting
PDF-TRANS-15: Implement Market Price Public Parking	Qualitative/supporting
PDF-LU-1: Mixed-Use Project Design	Qualitative/supporting
PDF-LU-2: Provision of Urban Core	Qualitative/supporting
PDF-LU-3: Short Walkable Blocks	Quantitative
PDF-LU-4: Increased Residential Density	Quantitative
PDF-LU-5: Walkable/Bikeable Community	Qualitative/supporting
PDF-LU-6: Transit Benefits	Qualitative/supporting
PDF-LU-7: Integrated Design	Qualitative/supporting
PDF-LU-8: Other Integrated Project Features	Qualitative/supporting
PDF-LU-9: Complete Streets	Qualitative/supporting
PDF-LU-10: Traffic Calming	Qualitative/supporting
PDF-LU-11: Roundabouts	Qualitative/supporting

All PDFs would be required as City-imposed Conditions of Approval to ensure they are implemented during construction and operation of the Project.

Construction

Construction of the Project would result in energy consumption primarily associated with use of off-road construction equipment, on-site hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 4.3, Air Quality, are also applicable for the estimation of construction-related energy consumption. As such, see Section 4.3.3 and Appendix D for a discussion of construction calculation methodology and assumptions used in the energy analysis. In addition, the following methodology was used to estimate construction electricity and petroleum consumption.

Electricity

Electricity is not expected to be consumed in large quantities during Project construction, as construction equipment and vehicles are generally not electric but rather diesel- or gas-powered. Although electrical service would be established to serve construction, the amount of electricity that will be used would likely be small. The Project would use electric equipment as required by **Mitigation Measure (MM) AQ-2** (for generators, air compressors, and welders used during specific phases) and **MM-AQ-3** (for additional equipment where commercially available); however, electricity use is still anticipated to be small. Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by MVU.

Natural Gas

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "Petroleum" subsection.

Petroleum

Potential petroleum consumption during Project construction was assessed through projected vehicle trip generation and off-road equipment used as provided by the California Emissions Estimator Model (CalEEMod) outputs in the criteria air pollutant and GHG emissions calculations (Appendix A of Appendix D). Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton of CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton of CO_2 per gallon (The Climate Registry 2023). Heavy-duty construction equipment associated with construction activities and vendor trucks were assumed to use diesel fuel. It was assumed that construction workers would travel to and from the Project site in gasoline-powered vehicles. Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel.

Operation

Energy consumption related to Project operations with implementation of PDFs would include electricity use for building operations, water demand, and wastewater treatment; natural gas for restaurant operation; and petroleum consumption from Project vehicle travel. Buildout of the Project was assumed to be 2037. Without PDFs, the Project would similarly consume electricity and petroleum during building operations, but would also consume natural gas for building operation.

Electricity

The Project's operational phase would require electricity for multiple purposes including, but not limited to, building heating and cooling; lighting; appliances, including refrigeration; electronics; equipment; and machinery. Electricity would also be consumed during operation of the Project related to water usage and electric vehicle trips. CalEEMod was used to analyze electrical usage during operation under the without PDF and with PDF scenarios.

Under the Project without PDFs scenario, default CalEEMod values were used to estimate the Project's building electricity needs, which assumes that energy would be provided by both electricity and natural gas. Because

CalEEMod does not provide default energy values for the lake or swimming pools and spaces, Project-specific estimates were used.

Under the Project with PDFs scenario, Project-specific energy values were applied that reflect electrification of all buildings with the exception of the restaurant spaces. The default value for electricity consumption for the proposed land uses was updated for the Project based on the Moreno Valley Residential Community Annual Energy Use Calculations Report (Appendix D). Default CalEEMod values for the parking lot and parking structure were applied, which assume electricity use only. To approximate energy use of the Project with PDFs scenario, VCA Green developed proxy models.[3] VCA Green utilized California Building Energy Code Compliance 2022 (CBECC22) to develop the models and to run the energy simulation. CBECC22 is approved by CEC for compliance with Title 24 Part 6 2022 Energy Efficiency Standards using the performance pathway. The proxy models used were situated in Moreno Valley and used the weather data from the weather station in Riverside, California. They were based on buildings of similar sizes and space functions.

For the Project with PDFs scenario, Energy Use Intensities (EUIs) were derived from the proxy model results. EUIs are generally used to compare annual energy usages. The energy modeling provided annual consumption for energy regulated by Title 24 Part 6 (energy used in heating, cooling, lighting, and hot water heating) and unregulated (process and plug loads [e.g., appliances and equipment that are plugged into an outlet]). EUIs for both regulated and unregulated loads were derived by dividing these results by the building areas of the proxies. Annual building consumption was derived by multiplying the calculated EUIs by the building square footage provided by the Project applicant.

The Project would also consume electricity associated with lake operation associated with a recirculation pump, an irrigation pump, and an aeration air compressor. The Project's swimming pools and spas would also consume electricity through a pump and heating. The electricity use from operation of the lake and swimming pools and spas were based on Project-specific information that was inputted into CalEEMod for the without and with PDF scenarios.

Solar power generation would be incorporated into the Project site via solar panels, which would be located on top of residential and nonresidential buildings. To calculate annual PV generation, VCA Green utilized a comparable process to that used for the energy consumption calculations. Calculated energy generation numbers were extracted from the proxy models, divided by square footage of the proxy models, then multiplied by the square footages of the proposed buildings to produce a PV electric generation EUI. The Project with PDFs would also include solar water heating to meet a minimum of 50% of the swimming pool and spa heating demand.

Natural Gas

Project natural gas consumption is based on the estimated total annual building load summaries from CalEEMod. Because PDF-AQ/GHG-3 requires the Project to be all electric, no natural gas usage was assumed for the Project with PDFs, with exception of the restaurant land uses, which were assumed to consume natural gas at rates consistent with the Moreno Valley Residential Community Annual Energy Use Calculations Report (Appendix D). For the Project without PDFs scenario, natural gas usage was assumed for all Project land use building operations consistent with default CalEEMod values.

[3] Proxy models are energy models built to simulate energy use of the project types analyzed. The anticipated building envelope features and mechanical equipment of the Project's building types analyzed were used for the building inputs. Specific Project building plans and geometry were unavailable at the time the proxy models were developed, so buildings of similar usage were used as the basis.

Petroleum

Petroleum would be consumed by Project-generated vehicle trips. Such consumption is a function of total VMT and estimated vehicle fuel economies for the vehicles accessing the Project site. With respect to estimated VMT and based on the trip frequency and trip length methodologies cited in Section 4.3 and Appendix A of Appendix D, the Project would generate an estimated 327,410,006 annual VMT without implementation of PDFs and 308,212,361 annual VMT with implementation of transportation-related PDFs, including PDF-TRANS-1 through PDF-TRANS-12, along area roadways for all residential and non-residential land use-based vehicles. Similar to construction worker and vendor trips, fuel consumption was estimated by converting the total CO_2 emissions from Project mobile sources to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Based on the annual fleet mix provided in EMFAC2021, for buildout of the Project, approximately 94% of the fleet mix using fossil fuels (with the exception of natural gas) was assumed to run on gasoline and approximately 6% of the fleet mix was assumed to use diesel. While a portion of vehicles accessing the site are anticipated to be plug-in hybrid electric vehicles or battery electric vehicles, all vehicles were conservatively assumed to consume petroleum for the energy analysis.

4.6.4 Impact Analysis

4.6.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

At the time that the 1999 EIR was certified, a separate evaluation of energy impacts was not required under CEQA. Therefore, the impacts of project-related construction and operational energy use were not previously and separately considered, and no energy-specific mitigation measures were identified or required. However, the 1999 EIR evaluated project consistency with state, regional, and local goals, policies, and regulations related to energy consumption and efficiency measures in the previous air quality analysis and adopted mitigation to reduce identified significant effects. Specifically, the 1999 EIR found energy-related air quality impacts would be less than significant through compliance with building design requirements from California Code of Regulations (Title 24) and building energy conservation measures including light-colored roofing, double-pane windows, solar water heaters, or an alternative approved by the Community and Economic Development Department. Further, the 1999 EIR found the project would result in the long-term irreversible commitment of energy resources from non-renewable fossil fuels (City of Moreno Valley 1999b).

Mitigation

No energy-specific mitigation was identified or required.

2003 Supplemental EIR

Analysis

At the time the 2003 Supplemental EIR was certified, a separate evaluation of energy impacts was not required under CEQA. Therefore, the impacts of project-related construction and operational energy use were not previously separately considered. However, like the 1999 EIR, the 2003 Supplemental EIR found energy-related air quality impacts would be less than significant through compliance with building design requirements from California Code

of Regulations (Title 24) and building energy conservation measures including light-colored roofing, double-pane windows, solar water heaters, or an alternative approved by the Community and Economic Development Department. It also similarly found the project would result in the long-term irreversible commitment of energy resources from non-renewable fossil fuels (City of Moreno Valley 2003).

Mitigation

No energy-specific mitigation was identified or required.

2005 Addendum

Analysis

At the time the 2005 Addendum was prepared, a separate evaluation of energy impacts was not required under CEQA. Therefore, the impacts of project-related construction and operational energy use were not previously separately considered. However, the 2005 Addendum found air quality impacts, including impacts associated with energy, would be consistent with the 1999 EIR (City of Moreno Valley 2005b).

Mitigation

No energy-specific mitigation was identified or required.

4.6.4.2 Project Impact Analysis

Threshold 1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

The Project's consumption of energy resources during construction and operation are evaluated in detail below.

Construction

Electricity

Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by MVU. The electricity used for such activities would be temporary, would be substantially less than that required for Project operation, would have a negligible contribution to the Project's overall energy consumption, and would not be wasteful, inefficient, or unnecessary. Impacts would be less than significant.

Natural Gas

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection "Petroleum Usage," below. Any minor amounts of natural gas that may be consumed as a result of Project construction would be temporary and negligible and would not have an adverse effect; therefore, impacts would be less than significant.

Petroleum

The estimated diesel fuel usage from construction equipment and vendor trucks, as well as estimated gasoline fuel usage from worker vehicles, is shown in Table 4.6-2. In addition, estimated gasoline fuel usage from construction with application of MM-AQ-2 has been provided in Table 4.6-3.

Table 4.6-2. Total Project Construction Petroleum Demand - Unmitigated

Construction Phase	Off-Road Equipment (Diesel)	Haul Trucks (Diesel)	Vendor Trucks (Diesel)	On-Site Trucks (Diesel)	Worker Vehicles (Gasoline)
	Gallons				
Phase 1 (2025-2026)	485,321	0	376,439	579	629,230
Phase 2 (2027-2028)	425,817	0	197,221	371	609,119
Phase 3 (2029-2030)	480,623	0	263,670	493	582,797
Phase 4 (2031-2032)	449,790	0	251,218	428	560,971
Phase 5 (2033-2034)	403,186	0	168,781	325	540,354
Phase 6 (2035-2036)	417,192	0	142,159	316	531,304
Total	2,661,929	0	1,399,487	2,511	3,453,774

Source: Appendix D.

Table 4.6-3. Total Project Construction Petroleum Demand - Mitigated

Construction Phase	Off-Road Equipment (Diesel)	Haul Trucks (Diesel)	Vendor Trucks (Diesel)	On-Site Trucks (Diesel)	Worker Vehicles (Gasoline)
	Gallons				
Phase 1 (2025-2026)	379,485	0	376,439	579	629,230
Phase 2 (2027-2028)	319,854	0	197,221	371	609,119
Phase 3 (2029-2030)	375,083	0	263,670	493	582,797
Phase 4 (2031-2032)	348,868	0	251,218	428	560,971
Phase 5 (2033-2034)	307,387	0	168,781	325	540,354
Phase 6 (2035-2036)	316,326	0	142,159	316	531,304
Total	2,047,003	0	1,399,487	2,511	3,453,774

Source: Appendix D.

In summary, construction associated with the development of the Project is estimated to consume a total of approximately 7,517,701 gallons of petroleum before implementation of MM-AQ-2. With implementation of MM-AQ-2, Project construction fuel consumption would total approximately 6,902,775 gallons of petroleum.

The Project would be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower (13 CCR 2449). The regulation (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet

average target rate, or that the fleet has met the Best Achievable Control Technology requirements. Overall, the Project would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy efficient than that found at comparable construction sites in the region or state.

Therefore, because petroleum use during construction would be temporary and would not be wasteful or inefficient, impacts would be less than significant.

Operation

Electricity

Project operation would require electricity for multiple purposes including, but not limited to, building heating, ventilation, and air conditioning; lighting; appliances; and electronics. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. The Project's electricity usage without PDFs was based on default CalEEMod values and supplemented with Project-specific data for land uses without default values available. The Project's electricity usage with PDFs was based on calculations provided by VCA Green, with the exception of parking lots and structures, which were based on default CalEEMod values (see Appendix F of Appendix D). Default electricity generation consumption in CalEEMod was updated based on the Moreno Valley Residential Community Annual Energy Use Calculations Report (Appendix D). Notably, the Project's energy consumption was modeled to meet 2022 Title 24 Part 6 energy code compliance. Table 4.6-4 shows the estimated annual operational electricity demand by land use without PDFs.

Table 4.6-4. Project Annual Operational Electricity Demand Summary Without PDFs at Buildout (2037)

Electricity Demand	kWh/year
Apartments Mid Rise	42,443,691
Apartments Low Rise	51,350,929
City Park (Active)	0
User Defined Recreational (Lake)	1,183,000
City Park (Lake Promenade)	0
Recreational Swimming Pool and Spas	45,000
Hotel	4,833,147
Elementary School	1,249,551
Junior High School	553,187
Other Asphalt Surfaces	0
Regional Shopping Center	340,861
High Turnover (Sit Down Restaurants)	525,670
Enclosed Parking with Elevator	17,492,956
Parking Lot	4,178,362
Water Consumption	7,394,864
Total	**131,591,218**

Source: Appendix D.
Note: kWh = kilowatt hour.

As shown in Table 4.6-4, the Project is anticipated to consume approximately 131,591,218 kilowatt hours of electricity per year. The Project proposes residential and commercial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. Table 4.6-5 presents the Project's electricity consumption with application of PDF-AQ/GHG-3 and PDF-AQ/GHG-4, which require the Project to develop all-electric buildings and provide rooftop PV solar panels on all residential and non-residential buildings.

Table 4.6-5. Project Annual Operational Electricity Demand Summary With PDFs at Buildout (2037)

Electricity Demand	kWh/year
Apartments Mid Rise	21,104,913
Apartments Low Rise	26,119,687
City Park (Active)	0
User Defined Recreational (Lake)	1,183,000
City Park (Lake Promenade)	0
Recreational Swimming Pool and Spas	315,000
Hotel	1,921,413
Elementary School	670,025
Junior High School	296,626
Other Asphalt Surfaces	0
Regional Shopping Center	179,991
High Turnover (Sit Down Restaurants)	265,564
Enclosed Parking with Elevator	17,492,956
Parking Lot	4,178,362
Water Consumption	5,889,664
Total	**79,617,201**

Source: Appendix D.
Notes: kWh = kilowatt hour.
Recreational swimming pools and spas electricity demand increases under the with PDF scenario as heating assumed to be provided by natural gas under the without PDF scenario will be provided by electricity instead per PDF-AQ/GHG-3.

As shown in Table 4.6-5, the Project is anticipated to consume approximately 79,617,201 kilowatt hours of electricity per year with implementation of PDF-AQ/GHG-3 and PDF-AQ/GHG-4. Solar water heating for the swimming pools and spas would further reduce the Project's electricity consumption beyond what is presented in Table 4.6-4. Uses identified as part of the Project are not inherently energy intensive, and the Project electricity demands in total would be comparable to the demands of other projects of similar scale and configuration. Additionally, the Project would be required to comply with the applicable Title 24 standards, which would further ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. Impacts would be less than significant.

Natural Gas

The Project without PDFs would consume natural gas for building operation and swimming pool and spa heating. Without the implementation of PDF-AQ/GHG-3, the Project would result in consumption of approximately 246,088,681 kBTU of natural gas per year at buildout in 2037.

As previously discussed, the Project would prohibit the installation of natural gas infrastructure in all residential and nonresidential buildings per PDF-AQ/GHG-3, with restaurant land uses being the only exception. Buildout of the Project would result in consumption of approximately 1,499,695 kBTU of natural gas per year at buildout in 2037. For these reasons, the natural gas consumption of the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum

Petroleum fuel consumption associated with motor vehicles traveling to and from the Project site is a function of the VMT as a result of Project operation. Fuel demand estimates for the Project are provided in Tables 4.6-6 and 4.6-7. Table 4.6-7 includes application of transportation-related PDFs including PDF-TRANS-1 through PDF-TRANS-12.

Table 4.6-6. Total Project-generated Transportation Annual Fuel Demand Without PDFs at Buildout (2037)

Vehicle Type	Vehicle MT CO2	Kg/CO2/Gallon	Estimated Annual Fuel Consumption (gallons)
Gasoline	92,202.03	8.78	10,501,370
Diesel	5,510.75	10.21	539,740
		Total	**11,041,111**

Source: Appendix D.

Table 4.6-7. Total Project-generated Transportation Annual Fuel Demand With PDFs at Buildout (2037)

Vehicle Type	Vehicle MT CO_2	Kg/CO_2/Gallon	Estimated Annual Fuel Consumption (gallons)
Gasoline	86,795.77	8.78	9,885,623
Diesel	5,187.63	10.21	508,093
		Total	**10,393,716**

Source: Appendix D.

As summarized in Tables 4.6-6 and 4.6-7, the Project at buildout in 2037 would result in an estimated annual fuel demand of 11,041,111 gallons of fuel without implementation of PDFs, and the Project would result in an estimated annual fuel demand of 10,393,716 gallons of fuel with implementation of PDF-TRANS-1 through PDF-TRANS-12. Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other mixed uses of similar scale and configuration. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT or associated excess and wasteful vehicle energy consumption.

Over the lifetime of the Project, the fuel efficiency of the vehicles being used by the residents, visitors, employees, and guests of the Project is expected to increase. Enhanced fuel economies realized pursuant to federal and state regulatory actions, as well as related transition of vehicles to alternative energy sources (e.g., electricity, biofuels, hydrogen cells), would likely decrease future gasoline fuel demands per VMT. The location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. Further, the Project is intended to provide workforce and multifamily housing in the City's Downtown Center, in close proximity to major employment and education centers, including the World Logistics

Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley Campus, Moreno Valley College, and the University of California, Riverside. Providing housing in this employment-rich area will improve the jobs-to-housing balance in a manner that reduces VMT and allows for further reductions through local transit improvement, including the proposed bus improvements and shuttle to the World Logistics Center (PDF-TRANS-14).

In addition, the Project would implement sidewalks, the lake promenade, and trails, facilitating and encouraging pedestrian access. In compliance with CALGreen, the Project would promote the use of bicycles as an alternative means of transportation by providing short-term and/or long-term bicycle parking accommodations. The Project would also incorporate scooter share and non-electric and electric bike share programs to reduce single-occupancy vehicle usage. Facilitating pedestrian and bicycle access for employees would reduce VMT and associated energy consumption. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary, and impacts would be less than significant.

Renewable Energy Potential

As part of the Project's design process, the Project applicant considered how the Project could increase its reliance on renewable energy sources to meet its energy demand. Renewable energy sources that were considered for their potential to be used to power the Project, consistent with CEC's definition of eligible renewables, include biomass, geothermal, solar, wind, and small hydroelectric facilities.

Given the Project site's location in an urbanized, developed area and the nature of the Project (i.e., residential, retail, hotel, educational, and park), there are considerable site constraints, including limited land availability, incompatibility with on-site and surrounding land uses for large-scale power generation facilities, unknown interconnection feasibility, compatibility with utility provider systems, and no known water or geothermal resources to harness, that would eliminate the potential for biomass, geothermal, and hydroelectric renewable energy to be installed on site.

Regarding wind power, first, due to the urban nature of the site and surrounding land uses, wind turbines are generally not feasible because they would represent an incompatible use. Specifically, a general rule is to install a wind turbine on a tower with the bottom of the rotor blades at least 30 feet above anything within a 500-foot horizontal radius and to be sited upwind of buildings and trees (APA 2011; NREL 2015), which the Project site cannot accommodate. Secondly, ideal places for wind turbines are where the annual average wind speed is at least 9 miles per hour (4 meters per second) for small wind turbines and 13 miles per hour (5.8 meters per second) for utility-scale turbines (EIA 2022b). However, the latest 5-year meteorological data (2010–2016) for the Perris meteorological monitoring station, which is determined to be the most representative data set for the Project site, shows an average wind speed of 1.65 meters per second. As such, wind power was determined not to be feasible for the Project.

The Project does include solar power, which would be provided by solar PV panels installed on all buildings as required by current California Building Code. At full buildout, the Project is anticipated to produce approximately 48,122,091 kilowatt-hours per year through solar PV electricity production not including solar water heating, which would be additional. As solar power technology improves in the future and regulations require additional solar, it is reasonable to assume that additional solar power may be provided to the Project site.

The Project would comply with the current energy code requirements regarding battery energy storage, which would apply to the Project's non-residential land uses and multifamily residential building that are four-stories or greater,

and which are based on solar PV requirements. In addition, the Project does not preclude installation of additional battery storage in the future.

In summary, the Project includes the on-site renewable energy source (i.e., solar) that was determined to be feasible for the site and does not include the on-site renewable energy sources that were determined to be infeasible.

Summary

As explained above, the Project would use renewable energy on site as determined to be feasible and would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum, during Project construction or operation. Impacts would be **less than significant**.

Threshold 2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Project would be subject to and would comply with, at a minimum, the California Building Energy Efficiency Standards (24 CCR Part 6). Part 6 of Title 24 establishes energy efficiency standards for nonresidential buildings constructed in California in order to reduce energy demand and consumption. As such, the Project would comply with the California Code of Regulations requirements for energy efficiency and is anticipated to exceed energy requirements through implementation of multiple PDFs, as explained below.

Part 11 of Title 24 of the California Code of Regulations sets forth voluntary and mandatory energy measures that are applicable to the Project under CALGreen. CALGreen institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial buildings, low-rise residential buildings, high-rise residential buildings, and schools, which would apply to the Project. As the California Building Energy Efficiency Standards and CALGreen are updated, the Project would continue to meet requirements that would further reduce energy-related consumption.

The Project would be consistent with the City of Moreno Valley General Plan 2040)[4], measures related to energy efficiency and construction energy use such as energy conservation, use of renewable energy, and water conservation, which indirectly affects electricity consumption. Specifically, the Project would provide energy efficient appliances (PDF-AQ/GHG-6), LED lighting (PDF-AQ/GHG-5), and energy smart meters (PDF-AQ/GHG-7), which support efficient use of energy resources. The Project would assist the City in achieving its renewable energy goals by providing rooftop solar, which is anticipated to total 48,122,091 kilowatt-hours per year at buildout, and 50% solar water heating for the swimming pools and spas (PDF-AQ/GHG-4). By requiring all-electric development for residential and non-residential land uses, with the exception of restaurant spaces (PDF-AQ/GHG-3), the Project supports the transition to a renewable, clean energy future, as electricity has the potential to be provided through renewable sources. The Project would also reduce energy use associated with water consumption through

[4] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

implementation of a water use efficiency and conservation plan for indoor and outdoor water use (PDF-AQ/GHG-12), use of recycled water for irrigation (PDF-AQ/GHG-13), and use of local well water for the lake (PDF-AQ/GHG-14). The Project would also be consistent with the City Climate Action Plan's required and voluntary measures regarding energy including energy smart meters (PDF-AQ/GHG-7) and water-wise landscaping features (PDF-AQ/GHG-12).

The Project would support energy-related strategies of the state, including the 2022 CARB Scoping Plan, by supporting all-electric appliances goals in new residential and commercial buildings. California's RPS program outlines the pathway for the state's electricity grid to transition to renewable energy; however, statewide RPS requirements do not apply to individual development projects like the Project. Nonetheless, as MVU meets the RPS milestones, the Project would benefit from cleaner electricity provided by MVU.

On this basis, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be **less than significant**.

4.6.5 Significance of Impacts Before Mitigation

Threshold 1: Wasteful, Inefficient, or Unnecessary Energy Resource Consumption

The Project would result in **less than significant** impacts related to the potential to result in wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation.

Threshold 2: Conflict with or Obstruct a Renewable Energy or Energy Efficiency Plan

The Project would result in **less than significant** impacts related to the potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.6.6 Mitigation Measures

4.6.6.1 Previously Adopted Mitigation Measures

1999 EIR

There are no energy-specific previously adopted mitigation measures.

2003 Supplemental EIR

There are no energy-specific previously adopted mitigation measures.

2005 Addendum

There are no energy-specific previously adopted mitigation measures.

4.6.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

No mitigation measures are required. Set forth in Section 4.3, Air Quality, **MM-AQ-2** would reduce the Project's less than significant impacts related to energy consumption.

4.6.7 Significance of Impacts after Mitigation

Threshold 1: Wasteful, Inefficient, or Unnecessary Energy Resource Consumption

The Project would result in **less than significant** impacts related to the potential to result in wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation without mitigation.

Threshold 2: Conflict with or Obstruct a Renewable Energy or Energy Efficiency Plan

The Project would result in **less than significant** impacts related to the potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency without mitigation.

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4.7 Geology and Soils

This section describes the existing geological conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and the 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in less than significant impacts related to geology, soils, seismic, and geologic hazard issues (City of Moreno Valley 1999b, 2003, 2005b).

The following analysis of the Project's potential impacts related to geology and soils is based predominantly on the 2023 geotechnical report prepared by Engeo Inc. for the Project site (Appendix C of this Subsequent EIR), a 2005 geotechnical report prepared by Leighton and Associates for the Project site, and publicly available information from the California Geological Survey and the U.S. Geological Survey.

4.7.1 Existing Environmental Conditions

Regional Geology

The Project is located in the San Jacinto Valley in western Riverside County in the Peninsular Ranges geomorphic province. San Jacinto Valley lies between the San Jacinto Mountains to the east and the Santa Ana Mountains to the west. The northern part of the Peninsular Ranges geomorphic province is between the Elsinore Fault Zone and San Jacinto Fault Zone, within a geologically complex region of Southern California. The Peninsular Ranges province lies in the southwestern most region of California and extends south 775 miles past the United States/Mexico border. It is bounded by the Transverse Ranges to the north, the Colorado Desert to the east, and the Pacific Ocean to the west. The province is characterized by a series of northwest-trending, fault-bound mountain ranges separated by long, broad valleys. The Project site is located on what is known as the Perris Block, which is a structurally stable block bound to the west by the Chino and Elsinore Fault Zones and the Elsinore Trough, to the east and northeast by the San Jacinto Fault Zone, to the north by the Cucamonga fault, and to the south by the San Felipe Fault Zone (Appendix C).

Topography

Based on geotechnical investigations, the topography of the Project site is generally flat, gently sloping from approximately 1,565 feet above mean sea level at the northern end to 1,505 feet above mean sea level at the southern boundary (Appendix C). Mass grading was completed for the majority (66%) of the Project site in 2007 and included the grading cut for a planned large central lake and smaller lakes near Nason Street (Appendix C). Infrastructure improvements were also completed on site pursuant to prior project approvals, including the construction of a concrete-lined drainage channel (Line F) and parallel earthen channel at the southeast portion of the Project site, construction of a storm drain line paralleling Cactus Avenue and connecting to Nason Street, and installation of utilities and construction of street improvements for the north-to-south aligned Nason Street, which bisects the development (Appendix C).

Soils and Geologic Formations

Locally, the Project site is on the valley floor, within alluvial soils of varying ages. Regional mapping identifies the site to be underlain by relatively young alluvial fan and alluvial valley deposits, and very old alluvial fan deposits. The northeast portion of the site is underlain by young alluvial fan deposits, which are characterized by gray sand, cobble, and gravel deposits (Morton et al. 2002 as cited in Appendix C). The western, central, and southeast portions of the site are underlain by very old alluvial fan deposits. These deposits have been described as mostly well-indurated (solidified), reddish-brown sand deposits containing minor gravel. In the central southern portion of the site, mainly south of the concrete-lined drainage channel, the site is underlain by young alluvial valley deposits, which are characterized by gray, unconsolidated, silty to sandy alluvium deposited on valley floors (Morton et al. 2002 as cited in Appendix C).

Intermittent deposits of undocumented fill related to past agricultural activities are also present on site. The previous 2005 geotechnical investigation report (Leighton and Associates 2005 as cited in Appendix C) indicated the presence of buried and open dump sites in the southeast portion of the site but stated no additional information was available regarding the depth, precise lateral limits, or subsurface conditions. The report indicated the dump sites were used for the dumping of refuse/household-type waste; however, upon further review, available data did not contain enough detail to confirm this conclusion.

According to the geotechnical report, the underlying materials at the Project site can be divided into two large areas with varying depths of undocumented fill overlaying alluvial deposits (Appendix C). The area generally west of Nason Street consists of approximately 20 to 35 feet of medium dense to very dense silty sand, sand with silt, and stiff to very stiff silt and clay, underlain by interbedded medium dense to dense poorly graded sand and silty sand, which is then underlain by medium stiff to hard clay and silt. The portion of the site east of Nason Street, generally north and south of the drainage channel, consists of up to 5 feet of medium dense to dense silty/clayey sand overlaying medium stiff to hard clay and silt. Select locations within this portion of the site, particularly southeast of Nason Street, consist of clayey/silty soil with occasional intermittent layers of dense sand approximately between 40 and 50 feet below ground surface.

Groundwater

During the subsurface explorations conducted as part of the geotechnical investigation for the Project, static groundwater was encountered at various exploration locations at depths ranging between approximately 30 and 50 feet below ground surface (Appendix C). Based on the groundwater readings obtained for four monitoring wells located within the Project site, the historic high groundwater elevation was approximately 30 feet below ground surface (Appendix C). Fluctuations in the level of groundwater may occur due to variations in rainfall, irrigation practice, and other factors not evident at the time measurements were made. Geotechnical investigations indicate shallow perched groundwater may be present on site; however, shallow groundwater above 30 feet below ground surface is not expected to occur at the Project site.

Seismicity

Southern California is a region of high seismic activity with numerous active and potentially active faults that are related to the active margin of the North American and Pacific tectonic plates. Earthquakes along the San Andreas Fault relieve the convergent plate stress from these two tectonic plates, which result in what are experienced as right lateral offsets. Faulting associated with the compressional forces creates earthquakes and is primarily responsible for the mountain building, basin development, and regional upwarping found in this area.

Major earthquakes have affected the region in the past and can be expected to occur again in the near future on any one of the principal active faults in the San Andreas Fault system. The principal active faults in the region include the San Andreas, San Jacinto and Elsinore Faults. Over the last 100 years, there have been a number of substantial seismic events, or earthquakes, in the region of the Project site, with most in the vicinity of the San Jacinto Fault Zone (Appendix C).

According to California Geologic Survey Special Publication 42, an active fault is defined as one that has had surface displacement within Holocene time (the last 11,700 years) and often referred to as a Holocene-active fault (CGS 2018). Nearby Holocene-active faults include the Claremont section of the San Jacinto fault, located approximately 6 miles northeast of the site; and the San Andreas fault, located approximately 23 miles to the northeast of the site (Appendix C).

Richter magnitude (M) is one measure of the size of an earthquake as recorded by a seismograph, the standard instrument that records ground shaking. The reported Richter magnitude for an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically, with each whole number step representing a tenfold increase in the amplitude of the recorded seismic waves. Earthquake magnitudes are also measured by their moment magnitude (Mw), which is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the movement or displacement across a fault (CGS 2002). The largest historical earthquake in the Project area occurred at the San Jacinto Fault, located just over 6 miles north of the Project site. The 1923 North San Jacinto Fault earthquake was estimated at M 6.3 and caused relatively minor damage in San Bernardino and Redlands (SCEDC 2023).

Seismic Hazards

Surface Fault Rupture

Surface fault rupture occurs where displacement or fissuring occurs along a fault zone at ground surface. While primary ground damage due to earthquake fault rupture typically results in a relatively small percentage of the total damage in an earthquake, the location of structures or facilities too close to a rupturing fault can cause profound damage. The primary method to avoid this hazard is either to conduct an investigation and identify precise location of the fault and set structures and facilities away from the fault line, or to avoid their construction in close proximity to an active fault. The magnitude and nature of fault rupture can vary for different faults, or even along different strands of the same fault. Ground rupture is considered most likely along Holocene-active faults.

The Alquist-Priolo Earthquake Fault Zoning Act, passed in California in 1972, required that the State Geologist establish Earthquake Fault Zones around the surface traces of active faults and issue corresponding maps. The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no mapped Holocene-active faults are known to pass through the immediate Project area. Therefore, the risk of ground rupture at the Project site is considered extremely low.

Ground Shaking

Earthquakes in the Southern California region can produce strong ground shaking that is felt over large distances. According to modeling conducted by the U.S. Geological Survey, the Southern California region has a 93% probability of experiencing an M 6.7 or greater earthquake before the year 2045 (USGS 2015).

Ground shaking intensity is related to the size of an earthquake, the distance to the site, and the response of the geologic materials that underlie a site. As a rule, the greater the earthquake magnitude and the closer the fault rupture to a site, the greater the intensity of ground shaking. Violent ground shaking is generally expected at and near the epicenter of a large earthquake. However, different types of geologic materials respond differently to earthquake waves in a manner that may alter ground shaking intensity. For instance, deep unconsolidated materials can amplify earthquake waves and cause longer periods of ground shaking. By contrast, dense sediments or bedrock tend to experience more of a sharp jolt or jolting that is shorter in duration.

A common measure of ground motion is the peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 9.8 meters per second squared.

The primary threat associated with ground shaking to the site would be an earthquake on the San Jacinto Fault, which could produce severe ground shaking. According to the geotechnical report, the PGA at the Project site could reach up to 0.86 g, which could damage structures if not appropriately constructed (Appendix C).

Secondary Earthquake Hazards

Secondary earthquake hazards include earthquake-induced land sliding, subsidence and seismic settlement, liquefaction, and lateral spreading.

Landslide. Areas having the potential for earthquake-induced landslides generally occur within areas of previous landslide movement or where local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacement. The risk of landslides at the site is considered to be low based on the site's flat topography.

Subsidence and Seismic Settlement. Subsidence or settlement is the gradual settling or sinking downward of an engineered structure (such as a building) due to the compaction of unconsolidated material below the foundation. Ground subsidence may occur as a response to natural forces such as earthquake movements, which can cause abrupt elevation changes of several feet or densification of low-density granular soils during an earthquake event that may cause several inches of settlement. Settlement accelerated by earthquakes can result in vertical or horizontal separations of structures or portions of one structure; cracked foundations, roads, sidewalks, and walls; and (in severe situations) building collapse and bending or breaking of underground utility lines.

Liquefaction. Soil liquefaction occurs primarily in saturated, loose, fine-to-medium-grained soils in areas where the groundwater table is within 50 feet of the surface. Shaking suddenly (as with an earthquake) causes soils to lose strength and behave as a liquid, resulting in ground failure. Liquefaction-related effects include loss of bearing strength, ground oscillations, lateral spreading, and flow failures or slumping.

The soils most susceptible to liquefaction are clean, loose, uniformly graded, saturated sands and silts. In general, upland areas have a lower liquefaction potential, except where significant alluvium is present in creek bottoms or swales. According to the evaluation in the geotechnical report based on available mapping and site-specific data obtained during the subsurface investigation, the potential for liquefaction at the site is low (Appendix C).

Lateral spreading. Lateral spreading, a secondary hazard related to liquefaction, occurs when there is horizontal displacement of surficial soil layers that move toward an open slope face such as incised channel or "free face" (Appendix C). Resulting horizontal displacements can reach up to several meters and can damage foundations,

bridges, roadways, and pipelines. Based on the subsurface explorations conducted during the geotechnical investigation, including groundwater data, the potential for lateral spreading was also considered low at the Project site (Appendix C).

Other Geologic Hazards

Landslides and Slope Stability

Significant factors that contribute to slope failure include slope height and steepness, shear strength and orientation of weak layers in the underlying geologic units, pore water pressures, rainfall, human activities such as excavation, and seismic activity. Downhill ground displacement may variously be termed a slope failure, landslide, or debris flow based on the speed, mass, and type of movement. The primary difference between landslides and debris flows is that, by definition, debris flows do not possess a basal slip surface. Therefore, debris flows are less likely to become reactivated by grading than historic landslides. The rate of rock and soil movements can vary from a slow creep over many years to a sudden mass movement. Landslides occur throughout California, but the density of incidents increases in zones of active faulting.

There are no known historic landslides within the Project area. The Project site's current topography, relatively flat with gentle slopes, is considered to have a low potential for landslides, slope failure, or debris flows.

Soil Erosion

Factors contributing to potential soil erosion include climate, the physical characteristics of soils, topography, land use, and the amount of soil disturbance. In general, the loss of ground cover caused by construction activities is a primary factor contributing to an increase in soil erosion potential. Erosion potential is also directly related to the terrain's steepness. Although the terrain is relatively flat at the Project site, exposed soil would still have the potential for erosion and soil loss.

Subsidence

Under certain circumstances, densification or compaction of soils can result in settlement or subsidence that can cause damage to foundations and structures, as well as water and sewer lines. In addition to subsidence caused by ground shaking/tectonic movements (discussed above), subsidence can occur from a few different factors including aquifer-system compaction due to lowering of groundwater levels by sustained groundwater overdraft, hydrocompaction of moisture deficient deposits above the water table (typically associated with irrigation of arid areas), fluid withdrawal from oil and gas fields, and subterranean mining. Aquifer system compaction and hydrocompaction have been significant factors in observed land subsidence in unincorporated areas of Riverside County, most predominantly impacting agricultural land (County of Riverside 2021. Subsidence in California is integrally linked to irrigation for agriculture from groundwater pumping. The lowering of the groundwater table for agricultural irrigation can cause compaction of the sediments by reducing the size and number of open pore spaces (USGS 2000). In aquifer systems that include semi-consolidated silt and clay layers (aquitards) of sufficient aggregate thickness, long-term ground-water-level declines can result in a vast one-time release of "water of compaction" from compacting aquitards, which manifests itself as land subsidence. Areas of documented subsidence in Riverside County are located outside of the Project area, in Coachella Valley and Elsinore-Temecula. Subsidence in San Jacinto Valley is occurring due to both aquifer compaction and tectonic deformation. While subsidence has not been documented at or near the Project site, the site is located in an area considered to susceptible to subsidence (County of Riverside 2016).

Expansive Soils

Expansive soils are typically associated with fine-grained clayey soils that have the potential to shrink and swell with cyclical changes in the moisture content. The ability of clayey soils to change volume can over time result in uplift or cracking to foundation elements or other rigid structures such as slabs-on-grade, rigid pavements, sidewalks, or other slabs or hardscape founded on these soils. According to the geotechnical investigation, the soils at the Project site have a shrink/swell potential that varies from very low to high (Appendix C). The majority of the expansive clay soils were found in the upper 10 feet within portions of the site generally located southeast of Nason Street (Appendix C).

Collapsible Soils

Collapsible soils are typically associated with semi-arid to arid climates where soil is rapidly deposited, creating a sensitive material with little to no cementation or strength. Collapse occurs when the subject soil is wetted or experiences increased loading (e.g., construction of a new building), which causes rapid changes in void ratio and results in soil settlement. Indicators of potentially collapsible soil are low density and low moisture content. Based on the subsurface exploration conducted during the geotechnical investigation, the density observed, laboratory data, and professional judgment of expert geologists, the potential for soil collapse within the Project site is low to moderate (Appendix C).

Paleontological Resources

The Project site is located within the northernmost Peninsular Ranges geomorphic province (Norris and Webb 1990; CGS 2002). This geomorphic province is characterized by northwest-trending mountain ranges and valleys that extend over 900 miles from the tip of the Baja California Peninsula to the Transverse Ranges (i.e., the San Bernardino and San Gabriel Mountains in Southern California). Regionally, the Peninsular Ranges are bounded to the east by the Colorado Desert and the west by the continental shelf and offshore islands (Santa Catalina, Santa Barbara, San Nicholas, and San Clemente) (Norris and Webb 1990; CGS 2002). Regional mountain ranges in the Peninsular Ranges geomorphic province include the Santa Ana, San Jacinto, and Santa Rosa Mountains. Geologically, these mountains are dominated by Mesozoic, plutonic igneous and metamorphic rocks that are part of the Peninsular Ranges batholith (Southern California batholith) (Jahns 1954).

According to published geological mapping by Morton and Matti (2002) at a 1:24,000 scale, the geotechnical report prepared for the Project (Appendix C), and the Western Science Center (WSC) records search (Confidential Appendix F), the Project site is almost entirely mapped as early Pleistocene (approximately 2.58 million years ago to 778,000 years ago; Cohen et al. 2022) very old alluvial fan deposits (map unit Qvof), which are composed of very coarse to very fine sands, often containing paleosols (fossil soil horizons) and silcretes (silica cemented rocks). The southeastern and eastern portions of the Project site are comprised of Holocene (<11,700 years ago; Cohen et al. 2022) sand and gravel deposits (map units Qya and Qyf). Cretaceous (approximately 145 million years ago to 66 million years ago) intrusive igneous rocks (map unit gr) are mapped to the north and south of the Project site. The early Pleistocene very old alluvial fan deposits are mostly well-dissected, well-indurated, reddish-brown sand deposits containing minor amounts of gravel (Morton and Matti 2002).

Numerous Pleistocene fossil localities are known from Riverside County. In his compilation of Quaternary (less than 2.58 million years ago) vertebrate fossil localities, Jefferson (1991) reported bison *(Bison antiquus*) from Beaumont; deer (*Odocoileus*), fish (*Osteichthyes*), reptile (*Sauria*), and large and small mammals (including mastodon [*Mammut* sp.] and camel [cf. *Camelops* sp.]) from Corona; horse (*Equus* sp.) from San Jacinto Valley; amphibian

(Anura [frog]), turtle (*Clemmys* sp.), snake (*Crotalus* sp.), bird (Aves), rodents (e.g., Sciuridae and *Thomomys bottae*) and large mammals (e.g., *Smilodon* sp. and *Mammuthus* sp.); and mammoth (*Mammuthus* sp.) from Winchester and Riverside. Due to the age of these deposits and their record of producing significant paleontological resources, Pleistocene very old alluvial fan deposits have high paleontological sensitivity or potential and any identifiable vertebrate fossil remains discovered in these deposits would be considered a significant paleontological resource. The Holocene sand and gravel deposits have low paleontological sensitivity; however, the sensitivity increases with depth, where they likely become old enough to preserve fossils.

4.7.2 Regulatory Framework

Federal

Occupational Safety and Health Administration Regulations

Excavation and trenching are among the most hazardous construction operations. Occupational Safety and Health Administration (OSHA) Excavation and Trenching Standard, Title 29 of the Code of Federal Regulations, Part 1926(P), covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

State

California Building Code

The state regulations protecting structures from geo-seismic hazards are contained in the California Building Code (CBC) (24 CCR Part 2), which is updated on a triennial basis. These regulations apply to public and private buildings in the state. Until January 1, 2008, the CBC was based on the then-current Uniform Building Code and contained additions, amendments, and repeals specific to building conditions and structural requirements of the State of California. The 2022 CBC, effective January 1, 2023, is based on the 2021 International Building Code and enhances the sections dealing with existing structures. Seismic-resistant construction design is required to meet more stringent technical standards than those set by previous versions of the CBC.

Chapters 16 and 16A of the 2022 CBC include structural design requirements governing seismically resistant construction, including (but not limited to) factors and coefficients used to establish seismic site class and seismic occupancy category for the soil/rock at the building location and the proposed building design. Chapters 18 and 18A include the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A); and the design of deep foundations (Sections 1810 and 1810A). Chapter 33 of the 2022 CBC includes requirements for safeguards at work sites to ensure stable excavations and cut or fill slopes (Section 3304).

Construction activities are subject to occupational safety standards for excavation and trenching, as specified in the California Safety and Health Administration regulations (Title 8 of the California Code of Regulations) and in Chapter 33 of the CBC. These regulations specify the measures to be used for excavation and trench work where

workers could be exposed to unstable soil conditions. The Project would be required to employ these safety measures during excavation and trenching

California Health and Safety Code

Sections 17922 and 17951–17958.7 of the California Health and Safety Code require cities and counties to adopt and enforce the current edition (2022) of the CBC, including a grading section. Sections of Volume II of the CBC specifically apply to select geologic hazards.

California Occupational Safety and Health Administration Regulations

In California, California OSHA has responsibility for implementing federal rules relevant to worker safety, including slope protection during construction excavations. California OSHA's requirements are more restrictive and protective than federal OSHA standards. Title 8 of the California Code of Regulations, Chapter 4, Division of Industrial Safety, covers requirements for excavation and trenching operations, as well as safety standards whenever employment exists in connection with the construction, alteration, painting, repairing, construction maintenance, renovation, removal, or wrecking of any fixed structure or its part.

Natural Hazards Disclosure Act

Effective June 1, 1998, the Natural Hazards Disclosure Act requires that sellers of real property and their agents provide prospective buyers with a Natural Hazard Disclosure Statement when the property being sold lies within one or more state-mapped hazard areas. If a property is located in a Seismic Hazard Zone as shown on a map issued by the State Geologist, the seller or the seller's agent must disclose this fact to potential buyers.

California Code of Regulations, Title 14, Division 3, Chapter 1

Title 14, Division 3, Chapter 1, of the California Code of Regulations prohibits any person from destroying, disturbing, or mutilating geological features including paleontological resources. This applies to all excavation and grading activities that would be performed under the Project.

Local

City of Moreno Valley General Plan

The City of Moreno Valley General Plan 2040 Safety Element identifies natural and human-made hazards in Moreno Valley, as well as measures to promote public safety and effective emergency response and recovery. The following goals and policies related to geology and soils are identified in the Safety Element and are applicable to the Project (City of Moreno Valley 2021)[1],:

Goal S-1: Protect life and property from natural and humanmade hazards.

Policy S.1-1: Continue to restrict the development of habitable structures within Alquist-Priolo Earthquake Fault Zones consistent with State law.

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

Policy S.1-2: In areas of high liquefaction risk (see Map S-2), require that project proponents submit geotechnical investigation reports and demonstration that the project conforms to all recommended mitigation measures prior to City approval.

Policy S.1-3: Require geotechnical studies for new development in areas where sewers are not available to ensure that the surrounding soil can support alternative wastewater disposal systems.

Policy S.1-4: Ensure that structures intended for human occupancy are designed and constructed to retain their structural integrity when subjected to seismic activity, in accordance with the California Building Code.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

4.7.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to geology and soils are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G, a significant impact related to cultural resources would occur if the Project would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
    b. Strong seismic ground shaking.
    c. Seismic-related ground failure, including liquefaction.
    d. Landslides.
2. Result in substantial soil erosion or the loss of topsoil.
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.7.4 Impact Analysis

4.7.4.1 Summary of Previous Impact Analyses

1999 EIR

Impacts of the original SP 218 related to geology and soils were analyzed in the 1999 EIR. The original SP 218 proposed to develop 2,922 single-family and multifamily residential units, a 148.7-acre golf course, 24.1 acres of retail/commercial uses, an 81.7-acre school and recreational complex, and a 25.9-acre community park. The original SP 218 also included drainage and infrastructure improvements in the Specific Plan Area.

Geologic Materials/Soils

Analysis

The 1999 EIR discussed the presence of soils considered collapsible in areas of proposed development where foundation supports and structures were proposed. However, the 1999 EIR determined that any such constraints would be overcome through standard site preparation and engineering practices and, therefore, would not be a significant geotechnical concern. The 1999 EIR found that with implementation of the conclusions and recommendations of the geotechnical report and compliance with standard practice, impacts would be less than significant without mitigation (City of Moreno Valley 1999b).

Mitigation

No mitigation was required.

Geologic Hazards, Seismicity, and Seismic Hazards

Analysis

The 1999 EIR found that no active or potentially active faults were known to occur within the site boundaries and, thus, the potential for surface fault rupture was considered low. However, the location of regional faults was found to present a risk of violent ground shaking from a seismic event. The mixed-use development would include a range of normal- to high-risk land uses that could be subject to substantial ground shaking. The 1999 EIR determined that impacts related to seismic ground shaking would be less than significant through Project compliance with the site preparation and engineering requirements of the CBC and implementation of the conclusions and recommendations in the geotechnical report (City of Moreno Valley 1999b).

Mitigation

No mitigation was required.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR did not discuss impacts to geology and soils.

Mitigation

No mitigation was identified.

2005 Addendum

The original SP 218 was amended in 2005. The 2005 Aquabella SPA amended the original SP 218 to age-restrict 2,702 of the 2,922 residential units proposed on site for seniors. Additionally, the 2005 Aquabella SPA eliminated the schools (except for the already developed Vista del Lago High School), planned for a 300-room hotel, and replaced the previously approved golf course with an approximately 40-acre lake complex (City of Moreno Valley 2005a). Section 6.1 of the 2005 Addendum evaluated the changes in the environmental analysis related to "Earth Resources" with the 2005 Aquabella SPA compared to the 1999 EIR (City of Moreno Valley 2005b).

Analysis

The 2005 Addendum found that the site would likely experience strong ground shaking, which could create seiche wave conditions at the proposed lake system. However, the revised plan did not include inhabited structures that would be located in areas of potential flooding from such an event. Overall, the regional seismic hazard risks were determined to be less than those of the original SP 218 due to a reduction in the number of residents related to reduced senior household sizes (City of Moreno Valley 2005b).

Mitigation

No mitigation was required.

4.7.4.2 Project Impact Analysis

The current Project is an amendment to the 2005 Aquabella SPA, which amended the original SP 218. This second amendment would introduce an additional 12,078 multifamily housing units to the Project site compared to the 2,922 residential dwelling units that were previously approved under 2005 Aquabella SPA and original SP 218, for a total of 15,000 units. Like the 2005 Aquabella SPA, the Project includes 40 acres of lakes. An additional 25 acres of parks and a 15-acre lake promenade are also proposed. As with the original SP 218 and similar to the 2005 Aquabella SPA, 25 acres of commercial uses continue to be proposed. Compared to the prior approvals, the Project would expand the eastern boundary of the Project site slightly to include an additional 10-acre parcel.

The Project would include 40 acres designated for school use, with up to three elementary school sites and one middle school site, which is 10 acres more than the original SP 218 after accounting for the completed 50-acre Vista del Lago High School campus (which is no longer within the Project site). Project components that were previously approved under the 2005 Aquabella SPA are not analyzed as part of this document. Impacts to geology and soils based on the Project changes are analyzed below.

Threshold 1: Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

a. **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of as known fault. Refer to Division of Mines and Geology Special Publication 42.**

As previously analyzed, there are no Holocene-active faults located on site or that intersect the Project site. The site is not identified as located within an Alquist-Priolo Fault Zone. As a result, the potential for fault rupture remains very low. Therefore, as with the prior project approvals, the potential impact related to fault rupture remains **less than significant.**

b. **Strong seismic ground shaking?**

The Project site is located in a seismically active area that is expected to experience moderate to severe seismic events in the future, as discussed in the 1999 EIR and 2005 Addendum. According to estimates calculated in the geotechnical report that was prepared for the Project, the PGA at the site could reach up to 0.86 g, which is capable of damaging structures if they are not constructed appropriately (Appendix C). However, as with the prior project approvals, the current Project would be designed and constructed in accordance with the most current version of the CBC, which includes seismic design requirements to reduce and minimize the potential risk and adverse effects that might occur with strong seismic ground shaking. Therefore, as previously determined, the potential impacts related to ground shaking would remain **less than significant.**

c. **Seismic-related ground failure, including liquefaction?**

Liquefaction hazards are generally site-specific and depend on the underlying conditions of the site, including type of soil materials (e.g., density, grain size, and amounts of fine materials) and moisture content. The potential for liquefaction generally occurs during strong ground shaking with relatively cohesionless loose sediments where the groundwater table is near ground surface. According to the geotechnical report, the potential for liquefaction is low based on the deep observed depth to groundwater (30 to 50 feet), relatively dense and stiff soils present below the groundwater table, and geologist's professional experience (Appendix C). Further, all proposed improvements would be designed and constructed in accordance with the most recent version of the CBC, which includes requirements to ensure that any liquefaction hazards that may be present are addressed through site preparation and/or foundation design. As a result, the potential impact related to liquefaction would remain **less than significant.**

d. **Landslides?**

No known historic landslides have occurred on site. The Project site is relatively flat with gentle sloping topography that ranges from 1,565 feet above mean sea level in the north to 1,505 feet above mean sea level at the southern end of the site (Appendix C). While much grading was already completed on site, including for the lakes, the proposed Project includes construction of a large human-made lake, which would likely require further grading. If not designed appropriately, the cut slopes may not be able to support the design of the lake in static or dynamic (i.e., earthquake) conditions. According to the geotechnical report, the type of soils present at the site are suitable for the proposed lake, but a slope stability analysis would be required to develop the final planned slope conditions and slope design. As a condition of Project approval, prior to the issuance of a grading permit(s), the applicant would be required to demonstrate that the recommendations and specifications contained in the geotechnical report conducted for the Project and established in the CBC have been incorporated into the final Project design and construction

documents as minimum Project requirements to the satisfaction of the City of Moreno Valley. The final design-level geotechnical report would include, but is not limited to, general geotechnical recommendations, soil and excavation characteristics, grading, seismic design criteria, slope stability, foundation and concrete slab on-grade, slope maintenance, and site drainage and moisture protection that are consistent with current CBC requirements. With adherence to the final design level geotechnical report, prepared by a California licensed geotechnical engineer consistent with building code requirements, the Project would not affect the potential for landslides at the site, which would be **less than significant**.

Threshold 2: Would the Project result in substantial soil erosion or the loss of topsoil?

Erosion, or loss of topsoil, can occur as a result of, and can be accelerated by, activities such as construction, logging and mining, off-road vehicle use, and farming. While the majority of the site has been graded, the proposed Project would still require substantial earthwork activities during construction. These disturbances could expose soils to the effects of wind and water erosion. However, as with the previously approved projects, all construction activities would be required to implement erosion control best management practices consistent with the National Pollutant Discharge Elimination System General Construction Permit, which requires preparation and implementation of erosion and sediment control best management practices (e.g., covering stockpiles, use of silt fences, straw bales, and hydroseeding) pursuant to a stormwater pollution prevention plan. As a result, with implementation of the required best management practices, the potential for soil erosion or loss of topsoil during construction would be **less than significant**.

Once the Project is operational, on-site landscaping, hardscape, and stormwater drainage control features would reduce or eliminate the potential for erosion or loss of topsoil. Impacts would be **less than significant.**

Threshold 3: Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Similar to the prior project approvals, the current Project includes a substantial increase in new construction, which would represent an overall increase in new loadings (i.e., new weight) on the Project site. While the majority of the Project site was graded in 2007, the vertical and horizontal limits of the grading were not available for review during preparation of the current preliminary geotechnical investigation. As a result, the geotechnical report notes that there is a potential for encountering undocumented fill or relatively loose/soft subsurface materials that could potentially be insufficient to support the proposed improvements in their current condition and that would require additional grading to remove and recompact soils. In addition, it was reported that potential previous dump sites may have been located east of Nason Street and north of the concrete-lined drainage channel that, in their current condition, would be incapable of adequately supporting the new loadings (i.e., new weight) (Appendix C). As with the prior project approvals, compliance with the recommendations of the geotechnical report (e.g., removal of undocumented fill and replacement with engineered fill, overexcavation of building footprint areas and placement of compacted engineered fill, optimizing soil moisture conditions, and use of compacted aggregate base) and CBC would ensure adequate site preparation and structural engineering of future buildings to protect structures and occupants from on-site soil stability limitations. Impacts related to unstable soils would be **less than significant.**

The potential for landslides is discussed under Threshold 1(d) above and would be addressed through adherence to geotechnical report recommendations, compliance with the CBC requirements, and incorporation of final design recommendations that would be part of a final design level geotechnical report consistent with current CBC requirements. Impacts related to landslides would be **less than significant.**

The potential for lateral spreading, a secondary hazard related to liquefaction that occurs when surficial soil layers move toward an open slope face such as incised channel, or "free face," was deemed low and unlikely to occur based on site topography (generally flat), Project plans, groundwater depth (30 to 50 feet), soil types (i.e., medium dense to dense sandy soils), and subsurface explorations conducted during the geotechnical investigation (Appendix C). Impacts related to lateral spreading would be **less than significant.**

Subsidence could occur if site preparation (e.g., compaction of upper soils, use of engineered fill) is not done in accordance with CBC requirements or undocumented fills are left in their current condition. All proposed grading, fill placement, and recompaction of site soils would be in accordance with the current version of the CBC. In addition, as mentioned above, the potential presence of previous dump sites could represent areas of the site susceptible to subsidence or differential settlement, where differences in settlement rates cause damage to foundations and improvements. However, the geotechnical report prepared for the site found no indication of any former dump sites during their subsurface investigation (Appendix C). Subsidence can also occur due to fluid withdrawal (i.e., groundwater pumping or petroleum extraction). However, the Project site is located in an area that is not experiencing subsidence and the Perris North Groundwater Subbasin is being managed by Eastern Municipal Water District such that it is not in critical overdraft (see also discussion of groundwater in Section 4.10, Hydrology and Water Quality). Otherwise, the Project does not include any direct fluid extraction that could cause subsidence. Further, with all the proposed grading, site preparations, and foundation design that would be done in accordance with CBC requirements and overseen by a state licensed geotechnical engineer, the potential for adverse effects from subsidence due to the construction of the Project would be **less than significant**.

Collapsible soils typically form as alluvial soils that are rapidly deposited in semi-arid to arid climates, creating a sensitive material with little to no natural cementation or strength. These soils can collapse when wetted, causing rapid changes in the void ratio and resulting in soil settlement. Based on the subsurface explorations, the observed characteristics of the on-site soils were found to be indicative of medium dense to very dense sand or stiff to hard fine-grained material (Appendix C). Given the density/consistency of the soil observed, the laboratory data, and professional experience with similar geologic conditions, it was determined that the potential for soil collapse within the Project site is low to moderate. However, implementing all site preparation measures contained in a final design level geotechnical report consistent with CBC requirements would ensure potential impacts from collapsible soils, to the extent they are present at the site, would be **less than significant**.

Threshold 4: Would the Project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Expansive soils are soils that are high in clays or silts that will shrink or swell depending on changes in moisture content over time, which can result in damage to foundations, sidewalks, and roadways. The soils at the Project site were evaluated for their potential to exhibit expansive properties and found to range from very low to high potential for expansion (Appendix C). If not engineered appropriately and left without alteration, expansive soils could adversely affect the Project improvements. However, standard geotechnical measures including proper fill selection, moisture control, compaction during construction, and use of appropriate foundations (e.g., post-tensioned mat foundations placed on engineered fill or compacted fill) in accordance with CBC requirements would ensure the effects of expansive soils remain **less than significant**. The final design level geotechnical report, as required by the CBC, would include site specific evaluations, preparation requirements (e.g., removal or treatment of expansive soils), and foundation designs to effectively avoid and minimize expansive soil impacts. As a result, the potential impact from any moderate to highly expansive soils would be **less than significant**.

Threshold 5: Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

There are no septic tanks or alternative wastewater disposal systems proposed as part of the Project. As a result, there would be **no impact** related to this criterion.

Threshold 6: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

In accordance with the CEQA and the Society of Vertebrate Paleontology guidelines (SVP 2010), Dudek performed a paleontological resources inventory for the Project. The inventory included a paleontological records search through the Natural History of Los Angeles County (LACM) and the WSC, a review of geological mapping and pertinent geological and paleontological literature, and an intensive pedestrian survey. The paleontological records search letters were sent to the LACM and WSC on February 15, 2023. The LACM results were received on February 26, 2023, and the WSC results were received on March 17, 2023. No records of fossil localities were found within the boundary of the Project site; however, nine fossil localities are located nearby within similar sedimentary deposits as the Project site.

Published geological mapping (Morton and Matti 2002), published and unpublished geological and paleontological reports, and the geotechnical report were reviewed to identify geological units located within the Project site and determine their paleontological sensitivity. The geotechnical report prepared for the project (Appendix C) was reviewed to identify and confirm geological units located within the Project site at depth and determine their paleontological sensitivity. See Section 4.7.1, Existing Environmental Conditions, for the description of the paleontological and geological conditions.

The approximately 668-acre Project site is located in the southeastern portion of the City of Moreno Valley, south of State Route 60 (Moreno Valley Freeway), east of Lasselle Street Road, north of Iris Avenue, and west of Oliver Street. A Dudek paleontological field lead conducted a pedestrian survey of the Project site on March 30, 2023. The paleontological survey focused predominantly on the larger area west of Nason Street and south of Cactus Avenue, where Pleistocene very old alluvial fan deposits are mapped. Drainage improvements for stormwater and retention basins are situated in the south side of the Project site. Ground surface visibility was limited due to the scrubs and low-lying grasses. Surface exposures for directional channels, eroded hill sides, and retention basins were observed with reddish brown, unconsolidated, poorly sorted, silty to clayey, fine- to medium-and coarse-grained sands, with minor amounts of gravel. These deposits are mapped as very old alluvial fan deposits. No paleontological resources were observed during the pedestrian survey.

No paleontological resources were identified within the Project site as a result of the institutional records search, desktop geological review, and paleontological survey. The paleontological records search conducted by the WSC and the LACM revealed nine fossil localities located nearby within Pleistocene geological units similar to the unit that underlies the majority of the Project site. These early Pleistocene very old alluvial fan deposits have high paleontological resources sensitivity throughout their stratigraphic and geographic range; the Holocene sand and gravel deposits have low paleontological resources sensitivity on the surface, increasing with depth; the plutonic igneous rocks, mapped near the northern and southern Project boundaries, are considered to have no paleontological sensitivity. Based on the records search results, survey, and map and literature review, the Project site has high potential to produce paleontological resources at the surface in areas underlain by early Pleistocene very old alluvial fan deposits and at depth where underlain by Holocene sand and gravel deposits during planned construction activities. In the event that intact paleontological resources are discovered on the Project site, ground

disturbing activities associated with construction of the Project, such as grading and large diameter (greater than 2 feet) drilling during site preparation and trenching for utilities, have the potential to destroy a unique paleontological resource or site. Without mitigation, the potential damage to paleontological resources during construction would be a **potentially significant impact**.

4.7.5 Significance of Impacts Before Mitigation

Threshold 1: Substantial Adverse Effects

The Project would result in less than significant impacts related to rupture of a known earthquake fault, seismic ground shaking, seismic related ground failure (liquefaction), and landslides.

Threshold 2: Soil Erosion or Loss of Topsoil

The Project would result in less than significant impacts related to erosion and loss of topsoil.

Threshold 3: Unstable Soils

The Project would result in less than significant impacts related to unstable soils.

Threshold 4: Expansive Soils

The Project would result in less than significant impacts related to expansive soils.

Threshold 5: Septic Tanks

The Project would have no impacts related to septic systems.

Threshold 6: Paleontological Resources

The Project would result in potentially significant impacts related to paleontological resources.

4.7.6 Mitigation Measures

4.7.6.1 Previously Adopted Mitigation Measures

1999 EIR

No mitigation was required.

2003 Supplemental EIR

This topic was not included in the 2003 Supplemental EIR.

2005 Addendum

No mitigation was required.

4.7.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

No mitigation measures would be carried forward from the previous CEQA documents. The Project would not result in new or more severe significant impacts, nor have the Project's circumstances related to geology and soils substantially changed, including regarding geologic and seismic hazards; there is no new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the prior project environmental information was completed (14 CCR 15162).

The following mitigation measure would be required to reduce potential impacts to paleontological resources.

MM-GEO-1: Paleontological Resources Impact Mitigation Program and Paleontological Monitoring. Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) 2010 guidelines. The SVP 2010 guidelines define a qualified paleontologist as having the following:

1. A graduate degree in paleontology or geology, and/or a publication record in peer reviewed journals; and demonstrated competence in field techniques, preparation, identification, curation, and reporting in the state or geologic province in which the project occurs. An advanced degree is less important than demonstrated competence and regional experience.
2. At least two full years professional experience as assistant to a Project Paleontologist with administration and project management experience; supported by a list of projects and referral contacts.
3. Proficiency in recognizing fossils in the field and determining significance.
4. Expertise in local geology, stratigraphy, and biostratigraphy.
5. Experience collecting vertebrate fossils in the field."

The qualified paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Project with the performance criteria set forth herein. The PRIMP shall be consistent with the SVP 2010 guidelines and outline requirements for preconstruction meeting attendance, worker environmental awareness training, and where paleontological monitoring is required within the Project site based on construction plans and/or geotechnical reports. The PRIMP shall also include the procedures for adequate paleontological monitoring and discoveries treatment, paleontological methods (including sediment sampling for microinvertebrate and microvertebrate fossils), reporting, and collections management. The PRIMP shall also include a statement that any fossil lab or curation costs (if necessary due to fossil recovery) are the responsibility of the Project proponent/applicant. A qualified paleontological monitor shall be on site during initial rough grading and other significant ground-disturbing activities (including drilling greater than 2 feet in diameter) in areas underlain by early Pleistocene very old alluvial fan deposits and below a depth of 5 feet beneath the ground surface in areas underlain by Holocene sand and gravel deposits to determine if they are old enough to preserve scientifically significant paleontological resources. The SVP 2010 guidelines define a qualified paleontological monitor as having the following:

1. BS or BA degree in geology or paleontology and one year experience monitoring in the state or geologic province of the specific project. An associate degree and/or demonstrated experience showing ability to recognize fossils in a biostratigraphic context and recover vertebrate fossils in the field may be substituted for a degree. An undergraduate degree in geology or

paleontology is preferable, but is less important than documented experience performing paleontological monitoring, or

2. AS or AA in geology, paleontology, or biology and demonstrated two years experience collecting and salvaging fossil materials in the state or geologic province of the specific project, or
3. Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in the state or geologic province of the specific project.
4. Monitors must demonstrate proficiency in recognizing various types of fossils, in collection methods, and in other paleontological field techniques."

In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor will allow grading to recommence in the area of the find.

4.7.7 Significance of Impacts after Mitigation

Threshold 1: Substantial Adverse Effects

The Project would result in less than significant impacts related to rupture of a known earthquake fault, seismic ground shaking, seismic related ground failure (liquefaction), and landslides.

Threshold 2: Soil Erosion or Loss of Topsoil

The Project would result in less than significant impacts related to erosion and loss of topsoil.

Threshold 3: Unstable Soils

The Project would result in less than significant impacts related to unstable soils.

Threshold 4: Expansive Soils

The Project would result in less than significant impacts related to expansive soils.

Threshold 5: Septic Tanks

The Project would have no impacts related to septic systems.

Threshold 6: Paleontological Resources

The Project would result in less than significant impacts related to paleontological resources after implementation of **MM-GEO-1**.

4.8 Greenhouse Gas Emissions

This section describes the existing conditions related to greenhouse gas (GHG) emissions, identifies associated regulatory requirements, evaluates potential impacts, and identifies project design features (PDFs) and mitigation measures related to implementation of the Aquabella Specific Plan Amendment Project (Project) compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). At the time of the 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), evaluation of GHG impacts was not a separately required criterion under CEQA, and therefore, Project-related GHG impacts were not considered (City of Moreno Valley 1999b, 2003, 2005b).

The following analysis of the Project's potential impacts related to energy is based predominantly on the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report prepared by Dudek for the Project site (Appendix D of this Subsequent EIR [SEIR]).

4.8.1 Existing Environmental Conditions

Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period (i.e., decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2023c).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and is the most significant driver of observed climate change (IPCC 2013; EPA 2023d). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years,

primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system, which is discussed further below.

Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code, Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (see also CEQA Guidelines, Section 15364.5). Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[1]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic (i.e., caused by human activity) GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (e.g., rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone depleting substances. The two

[1] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's "Glossary of Terms Used in GHG Inventories" (2018), and EPA's "Glossary of Climate Change Terms" (2016d).

main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.

- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** Nitrogen trifluoride is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. Chlorofluorocarbons are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. They are chemically unreactive in the lower atmosphere (troposphere) and their production was prohibited in 1987 due to the chemical destruction of stratospheric O_3.

Hydrochlorofluorocarbons. Hydrochlorofluorocarbons are a large group of compounds, whose structure is very close to that of chlorofluorocarbons—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, hydrochlorofluorocarbons are used in refrigerants and propellants. They were also used in place of chlorofluorocarbons for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. Diesel particulate matter emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo [reflection of light from the Earth]) (EPA 2023e). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons (MT) of CO_2 equivalent (CO_2e).

The current version of CalEEMod (version 2022.1.1.20) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Project.

Sources of Greenhouse Gas Emissions

Per the EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2021, total United States GHG emissions were approximately 6,340.2 million metric tons (MMT) CO_2e in 2021 (EPA 2023f). Total U.S. emissions have decreased by 2.3% from 1990 to 2021, down from a high of 15.8% above 1990 levels in 2007. Emissions increased from 2020 to 2021 by 5.2% (314.3 MMT CO_2e). Net emissions (i.e., including sinks) were 5,586.0 MMT CO_2e in 2021. Overall, net emissions increased 6.4% from 2020 to 2021 and decreased 16.6% from 2005 levels. Between 2020 and 2021, the increase in total GHG emissions was driven largely by an increase in CO_2 emissions from fossil fuel combustion due to economic activity rebounding after the height of the COVID-19 pandemic. The CO_2 emissions from fossil fuel combustion increased by 6.8% from 2020 to 2021, including a 11.4% increase in transportation sector emissions and a 7.0% increase in electric power sector emissions. The increase in electric power sector emissions was due in part to an increase in electricity demand of 2.4% since 2020. Overall, there has been a decrease in electric power sector emissions from 1990 through 2021, which reflects the combined impacts of long-term trends in many factors, including population, economic growth, energy markets, technological changes including energy efficiency, and the carbon intensity of energy fuel choices (EPA 2023f).

According to California's 2000–2020 GHG emissions inventory (2022 edition), California emitted approximately 369 MMT CO_2e in 2020, including emissions resulting from out-of-state electrical generation (CARB 2022a). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high-GWP substances, and recycling and waste. As shown, as of 2020, transportation represents 37% of the total percentage of annual GHG emissions in California. Table 4.8-1 presents California GHG emission source categories and their relative contributions to the emissions inventory in 2020.

Table 4.8-1. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)[a]	Percent of Total[a]
Transportation	135.9	37%
Industrial	73.5	20%
Electric power	59.4	16%

Table 4.8-1. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)[a]	Percent of Total[a]
Commercial and Residential	38.8	10%
Agriculture	31.8	9%
High global-warming potential substances	21.4	6%
Recycling and waste	8.9	2%
Total	**369.2**	**100%**

Source: CARB 2022a.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
Emissions reflect the 2020 California GHG inventory by Scoping Plan Category (CARB 2022a).
[a] Percentage of total and annual GHG emissions have been rounded, and total may not sum due to rounding.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 IPCC Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, rising sea levels, and ocean acidification (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Global surface temperature in the first two decades of the 21st century (2001–2020) was 0.99°C [0.84°C to 1.10°C] higher than 1850–1900 (IPCC 2023). Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years (IPCC 2023). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020 (IPCC 2023).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed including an increase in annual average air temperature, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days[2], and an increase in variability of statewide precipitation (OEHHA 2022b).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply.

[2] Degree days are defined as the number of degrees by which the average daily temperature is higher than 65°F (cooling degree days) or lower than 65°F (heating degree days) based on the assumption that as outside temperature is 65°F results in comfortable indoor temperatures. Degree days reflect changes in climate and are used as a proxy for the energy demand for heating or cooling buildings.

Impacts of climate on physical systems have been observed such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in spring snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2022b).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California, as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (in 2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, ocean acidification, hypoxia,[3] and warming. To address local and regional governments' need for information to support action in their communities, the Fourth Assessment (CNRA 2018) includes reports for nine regions of the state, including the Los Angeles Region, which includes the urbanized portion of Riverside County where the Project is located. Key projected climate changes for the Los Angeles Region include the following (CNRA 2018):

- Continued future warming over the Los Angeles Region. Across the region, average maximum temperatures are projected to increase around 4°F to 5°F by the mid-century, and 5°F to 8°F by the late century.
- Extreme temperatures are also expected to increase. The hottest day of the year may be up to 10°F warmer for many locations across the Los Angeles Region by the late century under certain model scenarios. The number of extremely hot days is also expected to increase across the region.
- Despite small changes in average precipitation, dry and wet extremes are both expected to increase. By the late twenty-first century, the wettest day of the year is expected to increase across most of the Los Angeles Region, with some locations experiencing 25% to 30% increases under certain model scenarios. Increased frequency and severity of atmospheric river events are also projected to occur for this region.
- Sea levels are projected to continue to rise in the future, but there is a large range based on emissions scenario and uncertainty in feedbacks in the climate system. Roughly 1 foot to 2 feet of sea level rise is projected by the mid-century, and the most extreme projections lead to 8 feet to 10 feet of sea level rise by the end of the century.
- Projections indicate that the number of wildfires may increase over Southern California, but there remains uncertainty in quantifying future changes of burned area over the Los Angeles region.

[3] Hypoxia is the state in which oxygen is not available in sufficient amounts at the tissue level to maintain adequate homeostasis.

4.8.2 Regulatory Framework

International

In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis for human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.

On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change. Under the convention, governments agreed to gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of global climate change.

Federal

Massachusetts v. U.S. Environmental Protection Agency

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court ruled that CO_2 was a pollutant and directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the Clean Air Act (42 USC 7401 et seq.). On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- **Cause or Contribute Finding:** The combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (Public Law 110-140) (42 USC 152), among other key measures, would do the following in aiding the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.

- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In 2007, in response to the *Massachusetts v. EPA* decision, the Bush administration issued Executive Order (EO) 13432 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011 (15 USC 1392–1407); in 2010, the EPA and the NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 through 2016 (75 FR 25324–25728).

In 2010, President Obama issued a memorandum directing the Department of Transportation, the Department of Energy, the EPA, and the NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and the NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017 through 2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017 through 2021 (77 FR 62624-63200). On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks (40 CFR Parts 85, 86, 600; 49 CFR Parts 523, 531, 533, 536, 537).

In 2011, in addition to the regulations applicable to cars and light-duty trucks described above, the EPA and the NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6% to 23% over the 2010 baselines (76 FR 57106–57513).

In August 2016, the EPA and the NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

On April 2, 2018, the EPA, under administrator Scott Pruitt, reconsidered the final determination for light-duty vehicles and withdrew its previous 2017 determination, stating that the current standards may be too stringent and therefore should be revised as appropriate (83 FR 16077–16087).

In August 2018, the EPA and the NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and to establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards then in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2% to 3% of total daily consumption, according to the Energy Information Administration) and impact the global climate by 3/1000th of 1°C by 2100 (EPA and NHTSA 2018).

In 2019, the EPA and the NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 FR 51310), which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle (ZEV) mandates in California. In March 2020, Part Two was issued, which set CO_2 emissions standards and Corporate Average Fuel Economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026 .

In response to EO 13990, on December 21, 2021, the NHTSA finalized the Corporate Average Fuel Economy Preemption rule to withdraw its portions of the Part One Rule. The final rule concluded that the Part One Rule overstepped the agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests.

In March 2022, the NHTSA established new fuel economy standards that would require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8% annually for model years 2024 and 2025, and 10% annually for model year 2026 (40 CFR Parts 85, 86, 600; 49 CFR Parts 523, 531, 533, 536, 537).

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The act includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the United States by 40% as compared to 2005 levels by 2030. The act allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles, and includes measures that will make homes more energy efficient.

The Inflation Reduction Act authorized the EPA to implement the Greenhouse Gas Reduction Fund Program, which is a historic, $27 billion investment to mobilize financing and private capital to combat the climate crisis and ensure American economic competitiveness. The Greenhouse Gas Reduction Fund will be designed to achieve the following program objectives: reduce GHG emissions and other air pollutants; deliver the benefits of GHG- and air-pollution-reducing projects to American communities, particularly low-income and disadvantaged communities; and mobilize financing and private capital to stimulate additional deployment of GHG and air pollution reducing projects (EPA 2023g).

The Inflation Reduction Act confirms that reduction of GHGs is a core goal of the Clean Air Act and that the funding provided should allow the EPA to increase the scope of its Clean Air Act rulemakings. The act also confirms applicability of the Inflation Reduction Act to GHGs in three specific areas: (1) California's ability to regulate GHG emissions from vehicles, (2) the EPA's authority to regulate methane emissions from oil and gas facilities, and (3) the EPA's authority to regulate GHG emissions from power plants.

State

The statewide GHG emissions regulatory framework is summarized in this subsection by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, water, solid waste, and other state actions. The following text describes EOs, Assembly Bills (Abs), Senate Bills (SBs), and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The state has taken a number of actions to address climate change. These actions are summarized below, and include EOs, legislation, and CARB plans and requirements.

Executive Order S-3-05

Executive Order S-3-05 (June 2005) identified GHG emissions-reduction targets and laid out responsibilities among the state agencies for implementing the EO and for reporting on progress toward the targets. This EO identified the following targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry.

Assembly Bill 32

In furtherance of the goals identified in EO S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006 (California Health and Safety Code Sections 38500–38599). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020, and initiate the transformations required to achieve the state's long-range climate objectives.

Executive Order B-30-15

EO B-30-15 (April 2015) identified an interim GHG-reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050, as set forth in S-3-05. To facilitate achieving this goal, EO B3015 called for CARB to update the Climate Change Scoping Plan (Scoping Plan) to express the 2030 target in terms of MMT CO_2e. The EO also called for state agencies to continue to develop and implement GHG emission-reduction programs in support of the reduction targets.

Senate Bill 32 and Assembly Bill 197

SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 (California Health and Safety Code Section 38566) codified the 2030 emissions-reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 (California Health and Safety Code Section 38531) established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions-reduction measures when updating the Scoping Plan.

Executive Order B-55-18

EO B-55-18 (September 2018) identified a policy for the state to achieve carbon neutrality as soon as possible (no later than 2045) and achieve and maintain net negative emissions thereafter. The goal is in addition to the existing statewide targets of reducing the state's GHG emissions. CARB will work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

Assembly Bill 1279

The Legislature enacted AB 1279 (California Health and Safety Code Section 38562.2), the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85% below 1990 levels.

California Air Resources Board's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a scoping plan to help achieve the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code Section 38561[a]) and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan: The Climate Change Proposed Scoping Plan: A Framework for Change (Scoping Plan). The Scoping Plan included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission-reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (2014 Scoping Plan Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012 (CARB 2014). The 2014 Scoping Plan Update concluded that California was on track to meet the 2020 target, but recommended that a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The 2014 Scoping Plan Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050 including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

In December 2017, CARB released the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update) for public review and comment (CARB 2017b). The 2017 Scoping Plan Update builds on the successful framework established in the initial Scoping Plan and 2014 Scoping Plan Update, while identifying new technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' known commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350, California Public Utilities Code Section454.51), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant (SLCP) Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, the 2017 Scoping Plan Update recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

CARB adopted the 2022 Scoping Plan Update in December 2022. The 2022 CARB Scoping Plan Update outlines the state's plan to reach carbon neutrality by 2045 or earlier, while also assessing the progress the state is making toward achieving GHG reduction goals by 2030. Per the Legislative Analyst's Office, the 2022 CARB Scoping Plan identifies a more aggressive 2030 GHG goal. As it relates to the 2030 goal, perhaps the most significant change in the 2022 plan (as compared to previous Scoping Plans) is that it identifies a new GHG target of 48% below the 1990 level, compared to the current statutory goal of 40% below. Current law requires the state to reduce GHG emissions by at least 40% below the 1990 level by 2030 but does not specify an alternative goal. According to CARB, a focus on the lower target is needed to put the state on a path to meeting the newly established 2045 goal, consistent with the overall path to 2045 carbon neutrality. The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands, or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen (CARB 2022b).

The 2022 CARB Scoping Plan Update also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. Strategies for carbon removal and sequestration include carbon capture and storage from anthropogenic point sources, where CO_2 is captured as it leaves a facility's smokestack and is injected into geologic formations or used in industrial materials (e.g., concrete); and carbon dioxide removal from ambient air, through mechanical (e.g., direct air capture with sequestration) or nature-based (e.g., management of natural and working lands) applications.

The 2022 CARB Scoping Plan Update details "Local Actions" in Appendix D. The Appendix D Local Actions include recommendations to build momentum for local government actions that align with the state's climate goals, with a focus on local GHG reduction strategies (commonly referred to as climate action planning) and approval of new land use development projects, including through environmental review under CEQA. The recommendations provided in Appendix D are non-binding (i.e., not regulatory) and should not be interpreted as a directive to local governments, but rather as evidence-based analytical tools to assist local governments with their role as essential partners in achieving California's climate goals.

Appendix D recognizes consistency with a CEQA-qualified GHG reduction plan such as a Climate Action Plan as a first option for evaluating potential GHG emission impacts under CEQA. Absent a qualified GHG reduction plan, for residential and mixed-use projects, Appendix D provides a second option for evaluating project consistency with recommendations for key attributes that projects should achieve that would align with the state's climate goals. These key attributes include electric vehicle (EV) charging infrastructure, infill location, no loss or conversion of natural and working lands, transit-supportive densities or proximity to transit stops, reducing parking requirements, provision of affordable housing (at least 20% of units), no net loss of existing affordable units, and all-electric appliances with no natural gas connection (CARB 2022b). Projects that achieve all key attributes are considered "clearly consistent" with the state's climate and housing goals, since these attributes address the largest sources of operational emissions for residential and mixed-use projects. According to the 2022 CARB Scoping Plan Update, in general, residential and mixed-use projects that incorporate all these attributes are aligned with the state's priority GHG reduction strategies for local climate action as shown on Table 1 of the 2022 CARB Scoping Plan Update, as well as with the state's climate and housing goals. Such projects are considered consistent with the

Scoping Plan; therefore, the GHG emissions associated with such projects generally result in a less than significant GHG impact under CEQA (CARB 2022b). Additionally, the 2022 CARB Scoping Plan Update states that lead agencies under CEQA "may determine, with adequate additional supporting evidence, that projects that incorporate some, but not all, of the key project attributes are consistent with the State's climate goals" (CARB 2022b).

The above is CARB's recommended approach for evaluating significance of GHG impacts for residential and mixed-use development projects (CARB 2022b). However, alternative approaches to evaluating project-level alignment with state climate goals are also provided at Appendix D. Lead agencies under CEQA can make a significance determination based on whether the project would result in net-zero GHG emissions and whether the project is consistent with a significance determination/threshold recommended by the applicable air district or other lead agencies (CARB 2022b). Appendix D acknowledges, however, that net zero may not be feasible or appropriate for every project (CARB 2022b).

Executive Order B-18-12

EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also identified goals for existing state buildings for reducing grid-based energy purchases and water use.

Senate Bill 605 and Senate Bill 1383

SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state (California Health and Safety Code Section 39730) and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018 (California Public Resources Code Sections 42652–43654). SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon) and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its SLCP Reduction Strategy in March 2017 (CARB 2017c). The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases (CARB 2017c).

Assembly Bill 1757

AB 1757 (September 2022), California Health and Safety Code Section 38561.5, requires the CNRA to determine a range of targets for natural carbon sequestration and for nature-based climate solutions that reduce GHG emissions for future years 2030, 2038, and 2045. These targets are to be determined by no later than January 1, 2024, and are established to support the state's goals to achieve carbon neutrality and foster climate adaptation and resilience.

Building Energy

California Code of Regulations, Title 24, Part 6

The California Building Standards Code was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency

standards are reviewed every 3 years by the Building Standards Commission and the California Energy Commission (CEC) and revised if necessary (California Public Resources Code Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, to "reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code Section 25402[d]) and cost effectiveness (California Public Resources Code Section 25402[b][2–3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The current Title 24, Part 6 standards, referred to as the 2022 Title 24 Building Energy Efficiency Standards, became effective on January 1, 2023. The 2022 Energy Code focuses on four key areas in newly constructed homes and businesses quality (CEC 2021):

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking, and EV charging options whenever they choose to adopt those technologies.
- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available on site and complement the state's progress toward a 100% clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

California Code of Regulations, Title 24, Part 11

In addition to CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24), which is commonly referred to as California's Green Building Standards (CALGreen), establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The 2022 CALGreen standards are the current applicable standards. For nonresidential projects, some of the key mandatory CALGreen 2022 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, EV charging stations for passenger vehicles, medium heavy duty and heavy duty trucks , shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR, Part 11).

California Code of Regulations, Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency (20 CCR 1401–1410). CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies;

televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Senate Bill 1

SB 1 (2006) established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the California Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy-efficiency levels and performance requirements (California Public Resources Code Sections 25780–25784). Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for both homes and businesses within 10 years of adoption and placing solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed "Go Solar California," was previously titled "Million Solar Roofs."

Assembly Bill 1470

This bill established the Solar Water Heating and Efficiency Act of 2007 (California Public Utilities Code Sections 2851–2869). The bill makes findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand.

Assembly Bill 1109

Enacted in 2007, AB 1109 required CEC to adopt minimum energy efficiency standards for general-purpose lighting to reduce electricity consumption by 50% for indoor residential lighting and by 25% for indoor commercial lighting (California Public Resources Code Section 25402.5.4).

Renewable Energy and Energy Procurement

Senate Bill 1078, Senate Bill 1368, Executive Order S-14-08, Executive Order S-21-09 and Senate Bill X1-2, and Senate Bill 1020

SB 1078 (2002) (California Public Utilities Code Section 399.11 et seq.) established the Renewables Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107, EO S-14-08, and EO S-21-09).

SB 1368 (2006), required CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities (California Public Utilities Code Sections 8340-8341). These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC).

EO S-14-08 (2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the EO directed state

agencies to take appropriate actions to facilitate reaching this target. CNRA, in collaboration with CEC and the California Department of Fish and Wildlife, was directed to lead this effort.

EO S-21-09 (2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with CPUC and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health, and those that can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard; however, this regulation was not finalized because of subsequent legislation (SB X1-2) signed by Governor Brown in April 2011 (California Public Resources Code Section 25354[l]).

SB X1-2 (April 2011) expanded RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. SB X1-2 applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All these entities must meet the renewable energy goals listed above.

SB 350 (2015) further expanded the RPS program by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030 (California Public Utilities Code Section 454.51). In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires CPUC, in consultation with CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

SB 100 (2018) increased the standards set forth in SB 350, establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024; 52% by December 31, 2027; and 60% by December 31, 2030, be secured from qualifying renewable energy sources (California Public Utilities Code Sections 399.11, 399.15, 399.30). SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California. This bill requires that the achievement of 100% zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers to come from eligible renewable energy resources and zero-carbon resources: 90% by December 31, 2035; 95% by December 31, 2040; and 100% by December 31, 2045 (California Government Code Section 7921.505; California Health and Safety Code Section 38561; California Public Utilities Code Sections 454.53, 583, 454.59, 739.13).

Mobile Sources

State Vehicle Standards (Assembly Bill 1493 and Executive Order B-16-12)

AB 1493 (July 2002) was enacted in response to the transportation sector accounting for a large share of California's CO_2 emissions (California Health and Safety Code Section 43018.5). AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-In Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 identified a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare. As explained under the "Federal Vehicle Standards" description above, EPA and NHTSA approved the SAFE Vehicles Rule Part One and Two, which revoked California's authority to set its own GHG emissions standards and set ZEV mandates in California.

As also explained under the Federal subsection above, in March 2022, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and ZEV sales mandate. EPA's action concludes its reconsideration of the 2019 SAFE-1 rule by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

Heavy-Duty Diesel

CARB adopted the final Heavy-Duty Truck and Bus Regulation on December 31, 2014, to reduce diesel particulate matter, a major source of black carbon, and oxides of nitrogen emissions from heavy-duty diesel vehicles (13 CCR, Part 2025). The rule requires that diesel particulate matter filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule will require nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxics Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR, Part 2485).

Executive Order S-1-07

EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel—including extraction/feedstock production, processing, transportation, and final consumption—per unit of energy delivered.

Senate Bill 375

SB 375 (California Government Code Section 65080) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG-reduction targets for the automobile and light-truck sector for 2020 and 2035, and to update those targets every 8 years. SB 375 requires the state's 18 regional metropolitan planning organizations (MPOs) to prepare a sustainable communities strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG-reduction targets set by CARB. If an MPO is unable to devise an SCS to achieve the GHG-reduction target, the MPO must prepare an alternative planning strategy demonstrating how the GHG-reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

An SCS does not (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it (California Government Code Section 65080[b][2][K]). Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process. Unlike AB 32, the California Global Warming Solutions Act of 2006, with its market mechanisms that generate cap-and-trade auction proceeds to the state for reinvestment, SB 375 does not provide any new financial resources to make the production and preservation of affordable homes near transit feasible (TransForm 2014)

Advanced Clean Cars Program and Zero-Emissions Vehicle Program

The Advanced Clean Cars (ACC) I program (2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the Low-Emission Vehicle regulation for criteria air pollutant and GHG emissions and a technology forcing regulation for ZEVs that contributes to both types of emission reductions (CARB 2022c). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75% less smog-forming pollution than the average new car sold in 2015. The ZEV program will act as the focused technology of the ACC I program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018 to 2025 model years.

The ACC II program, which was adopted in August 2022, established the next set of Low-Emission Vehicle and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2022c). The main objectives of ACC II are as follows:

- Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
- Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

The ACC II rulemaking package also considers technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts.

Executive Order N-79-20

EO N-79-20 (2020) requires CARB to develop regulations as follows: (1) Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the state towards the target of 100% of in-state sales by 2035; (2) medium- and heavy-duty vehicle regulations requiring increasing volumes of new zero-emission trucks and buses sold and operated in the state towards the target of 100% of the fleet transitioning to ZEVs by 2045 everywhere feasible and for all drayage trucks to be zero emission by 2035; and (3) strategies, in coordination with other state agencies, the EPA, and local air districts, to achieve 100% zero emissions from off-road vehicles and equipment operations in the state by 2035. EO N-79-20 called for the development of a ZEV Market Development Strategy, which was released February 2021, to be updated every 3 years, that ensures coordination and implementation of the EO and outlines actions to support new and used ZEV markets. In addition, the EO specifies identification of near-term actions, and investment strategies, to improve clean transportation, sustainable freight, and transit options; and calls for development of strategies, recommendations, and actions by July 15, 2021, to manage and expedite the responsible closure and remediation of former oil extraction sites as the state transitions to a carbon-neutral economy.

Advanced Clean Trucks Regulation

The Advanced Clean Trucks Regulation was also approved by CARB in 2020 (CCR Title 13 Division 3 Chapter 1 Article 2, Sections 1963-1963.5). The purpose of the Advanced Clean Trucks Regulation is to accelerate the market for ZEVs in the medium- and heavy-duty truck sector and to reduce air pollutant emissions generated from on-road mobile sources (CARB 2021b). The regulation has two components, (1) a manufacturer sales requirement and (2) a reporting requirement:

- **Zero-emission truck sales:** Manufacturers who certify Class 2b–8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b–3 truck sales, 75% of Class 4–8 straight truck sales, and 40% of truck tractor sales.
- **Company and fleet reporting:** Large employers including retailers, manufacturers, brokers, and others will be required to report information about shipments and shuttle services. Fleet owners with 50 or more trucks will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Water

Senate Bill X7-7

SB X7-7, or the Water Conservation Act of 2009 (CCR Title 23, Division 2, Chapter 5.1), required that all water suppliers increase their water use efficiency with an overall goal of reducing per capita urban water use by 20% by December 31, 2020. Each urban water supplier was required to develop water use targets to meet this goal.

Executive Order B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO

includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance (California Building Code Title 24, Part 11 Chapters 4 and 5) that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Executive Order N-10-21

In response to a state of emergency due to severe drought conditions, EO N-10-21 (July 2021) called on all Californians to voluntarily reduce their water use by 15% from their 2020 levels. Actions suggested in EO N-10-21 include reducing landscape irrigation, running dishwashers and washing machines only when full, finding and fixing leaks, installing water-efficient showerheads, taking shorter showers, using a shut-off nozzle on hoses, and taking cars to commercial car washes that use recycled water.

Solid Waste

Assembly Bill 939, Assembly Bill 341, Assembly Bill 1826, and Senate Bill 1383

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code Section 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board (replaced in 2010 by the California Department of Resources Recycling and Recovery [CalRecycle]), which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required CalRecycle to develop strategies to achieve the state's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that it believes would assist the state in reaching the 75% goal by 2020.

AB 1826 (Chapter 727, Statutes of 2014, effective 2016 [California Public Resources Code Division 30, Section 42649.8]) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

SB 1383 (2016) (CCR Article 3 Section 1894-18984.3, 18984.5) requires a 50% reduction in organic waste disposal from 2014 levels by 2020 and a 75% reduction by 2025—essentially requiring the diversion of up to 27 million tons of organic waste—to reduce GHG emissions. SB 1383 also requires that not less than 20% of edible food that is currently disposed be recovered for human consumption by 2025.

Other State Actions

Senate Bill 97

SB 97 (2007) directed the Governor's Office of Planning and Research and CNRA to develop guidelines under CEQA for the mitigation of GHG emissions. CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures (14 CCR 15126.4[c]). The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. CNRA also acknowledged that a lead agency could consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a), as subsequently amended in 2018, states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines now note that an agency "shall have discretion to determine, in the context of a particular project, whether to: (1) Quantify greenhouse gas emissions resulting from a project; and/or (2) Rely on a qualitative analysis or performance-based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

Executive Order S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency.

Local

South Coast Air Quality Management District

Air districts typically act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA. This may include recommendations regarding significance thresholds, analytical tools to estimate emissions and assess impacts, and mitigations for potentially significant impacts. Although air districts will also address some of these issues on a project-specific basis as responsible agencies, they may provide general guidance to local governments on these issues (SCAQMD 2008).

Southern California Association of Governments

As noted above, California's 18 MPOs have been tasked with creating SCSs in an effort to reduce the region's vehicle miles traveled (VMT) in order to help meet AB 32 targets through integrated transportation, land use, housing, and environmental planning. Pursuant to SB 375, CARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the state's 18 MPOs. For the Southern California Association of Governments (SCAG), the state's initial mandated reductions were set at 8% by 2020 and 13% by 2035. In March 2018, CARB updated the SB 375 targets for SCAG to require 8% reduction by 2020 and a 19% reduction by 2035 in per-capita passenger vehicle GHG emissions.

Pursuant to Government Code Section 65080(b)(2)(B), the SCS must "set forth forecasted development pattern for the region which when integrated with the transportation network, and other transportation measures and policies, will reduce the GHG emissions from automobiles and light trucks to achieve the GHG reduction targets." To that end, SCAG has developed Connect SoCal, the 2020–2045 RTP/SCS, which complies with CARB's updated emissions reduction targets and meets the requirements of SB 375 by achieving per-capita GHG emissions reductions relative to 2005 of 8% by 2020 and 19% by 2035 (SCAG 2020). In addition, the plan anticipates a 25.7% decrease in time spent in traffic delay per capita and a 5% decrease in daily miles driven per capita from 2016 to 2045. The 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, and charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies, and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The following are the 2020-2045 RTP/SCS goals (SCAG 2020):

1. Encourage regional economic prosperity and global competitiveness
2. Improve mobility, accessibility, reliability, and travel safety for people and goods
3. Enhance the preservation, security, and resilience of the regional transportation system
4. Increase person and goods movement and travel choices within the transportation system
5. Reduce GHG emissions and improve air quality
6. Support healthy and equitable communities
7. Adapt to a changing climate and support an integrated regional development pattern and transportation network
8. Leverage new transportation technologies and data-driven solutions that result in more efficient travel

9. Encourage development of diverse housing types in areas that are supported by multiple transportation options
10. Promote conservation of natural and agricultural lands and restoration of habitats

On September 3, 2020, the Regional Council approved the 2020–2045 RTP/SCS in its entirety (SCAG 2020).

The RTP/SCSs do not require that local general plans, specific plans, or zoning be consistent with it but provide incentives for consistency for governments and developers.

The RTP/SCS is updated every four years. SCAG has recently released its draft 2024–2050 RTP/SCS, also referred to as "Connect SoCal 2024." However, Connect SoCal 2024 has not been adopted or approved at this time. CEQA does not require consideration of draft plans not adopted or approved at the time of the EIR (*South of Market Community Action Network v. City and County of San Francisco* [2019] 33 Cal.App.5th 321, 353; *Chaparral Greens v. City of Chula Vista* [1996] 50 Cal.App.4th 1134, 1145, fn. 7). For informational purposes, the draft Connect SoCal 2024 builds on the prior RTP/SCS and states goals divided into four categories: (1) Mobility: Build and maintain a robust transportation network; (2) Communities: Develop, connect and sustain communities that are livable and thriving; (3) Environment: Create a healthy region for the people of today and tomorrow; and (4) Economy: support a sustainable, efficient, and productive regional economic environment that provides opportunities for all residents. Should Connect SoCal 2024 be adopted prior to certification of this SEIR, this section will be updated in the Final SEIR.

City of Moreno Valley

City of Moreno Valley General Plan

The City of Moreno Valley (City) adopted the City of Moreno Valley General Plan 2040 (2040 General Plan) update on June 15, 2021 (City of Moreno Valley 2021).[4] Applicable goals and policies related to GHG emissions include the following:

Air Quality

EJ.1-A: Use the Climate Action Plan to guide City actions and investments aimed at reducing greenhouse gas emissions communitywide.

[4] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (Sierra Club v. City of Moreno Valley, et al., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR, CAP, or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

Circulation

C.2-H: Evaluate opportunities to implement roundabouts as traffic control as new development projects are proposed, considering safety, traffic calming, cost, maintenance and greenhouse gas reduction related to idling.

Safety

Goal S-3: Build community resilience to climate change.

S.3-1: Continue to collaborate in regional climate action planning initiatives.

S.3-3: Consider climate impacts, risk, and uncertainty in designing and evaluating capital improvement program design and adjust infrastructure design standards and project locations to address asset- and site-specific vulnerabilities.

S.3-7: Require new development to provide and maintain shade trees suitable to local climatic conditions. A climate-appropriate strategy may involve planting mostly drought-tolerant native trees that may have less foliage, interspersed with leafier trees at points where people gather.

S.3-B: Prepare a Landscape Manual or enhance landscape standards in the Municipal Code to mitigate urban heat island effects. In addition to identifying a climate-appropriate planting palette and recommended plant mix, targets for street tree canopy, shade structure coverage, and asphalt paving coverage should be identified and the reflectance of stone and rock ground cover in heat generation should be considered.

For further information regarding the analysis of the Project's consistency with both the 2040 General Plan and the former 2006 General Plan, please refer to this SEIR, Section 4.11, Land Use and Planning, and the Project's Specific Plan Amendment (Appendix A).

Environmental Justice

EJ.1-A: Use the Climate Action Plan to guide City actions and investments aimed at reducing greenhouse gas emissions communitywide.

City of Moreno Valley Climate Action Plan

The Moreno Valley Climate Action Plan (CAP) was adopted on June 15, 2021.[5] The City's CAP is designed to reinforce the City's commitment to reducing GHG emissions and demonstrate how the City will comply with the state's GHG emission reduction standards. The CAP is also intended to enable streamlined environmental review of future development projects, in accordance with the CEQA.[6] The CAP includes an inventory of the City's GHG emissions, forecasts of future GHG emissions, measures to reduce GHG emissions consistent with state requirements, and monitoring and reporting processes to ensure targets are met (City of Moreno Valley 2021b). The CAP includes 37 strategies targeting GHG emissions generated by transportation, industrial facilities, residential and commercial buildings, municipal activities, and off-road equipment. CAP strategies promote transportation demand

[5] See footnote 4 regarding the litigation and status of the City's CAP.

[6] The Project is not using the CAP's streamlined environmental review process; instead, the Project has committed to the preparation of this SEIR.

management (TDM) programs, enhance transit services, incentivize energy efficient upgrades and construction, streamline installation of solar panels, subsidize energy-efficient retrofits for low-income homeowners, support urban greening, and more. The City has developed a checklist to assist project applicants and the City in identifying the minimum CAP-related requirements specific to proposed projects.

4.8.3 Significance Criteria

CEQA Guidelines

The significance thresholds used to evaluate the Project's GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). For the purposes of this GHG emissions analysis, the Project would have a significant environmental impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
11. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the Project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated on a project-level under CEQA.

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (14 CCR 15064.4[a]). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (14 CCR 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, the CEQA Guidelines specify that "when adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

The extent to which a project increases or decreases GHG emissions in the existing environmental setting should be estimated in accordance with CEQA Guidelines Section 15064.4, Determining the Significance of Impacts from Greenhouse Gas Emissions. The CEQA Guidelines indicate that when calculating GHG emissions resulting from a project, lead agencies shall make a good-faith effort based on scientific and factual data (Section 15064.4[a]), and lead agencies have discretion to select the model or methodology deemed most appropriate for enabling decision makers to intelligently assess the project's incremental contribution to climate change (Section 15064.4[c]).

The CEQA Guidelines do not indicate an amount of GHG emissions that constitutes a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (14 CCR 15064.4[a] and 15064.7[c]).

Governor's Office of Planning and Research Guidance

The Governor's Office of Planning and Research technical advisory titled "CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review," states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

South Coast Air Quality Management District Guidance

In October 2008, the South Coast Air Quality Management District (SCAQMD) proposed recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects, as presented in its Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Thresholds (SCAQMD 2008). This guidance document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association (CAPCOA), explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance document was not adopted or approved by the Governing Board. However, in December 2008, the SCAQMD adopted an interim 10,000 MT CO_2e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (see SCAQMD Resolution No. 08-35, December 5, 2008).

The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The most recent proposal, issued in September 2010, proposed a tiered threshold approach including the use of bright-line 3,000 MT CO_2e per year for mixed-use projects and an efficiency metric for 2020 and 2035 (SCAQMD 2010). The unadopted SCAQMD efficiency metric thresholds for 2035 are 3.0 MT CO_2e per service population per year for project-level analyses and 4.1 MT CO_2e per service population per year for plan level analyses (SCAQMD 2010).

Often, numeric GHG thresholds are not an appropriate fit for all land uses projects. Due to the nature of the Project—a large Specific Plan area that meets regional and statewide housing needs—a bright-line threshold, which does not

measure performance but project size, would not be appropriate. A performance-based threshold, such as an efficiency metric, would be appropriate for the Project; however, the SCAQMD service population threshold was tied to AB 32 goals, while the Project would be built after 2020.

The CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). The SCAQMD thresholds are recommendations and not required to be applied for CEQA GHG evaluations. The City, in exercising their lead agency discretion, could elect to not apply the SCAQMD thresholds for this Project. In addition, CEQA allows individual lead agencies to undertake a project-by-project analysis, consistent with available guidance and current CEQA practice, so the City could, if it chooses to, apply the SCAQMD recommended thresholds in other CEQA analyses.

City of Moreno Valley Climate Action Plan

As noted above, the City adopted a CAP in June 2021, and which is a qualified GHG reduction strategy under CEQA Guidelines section 15183.5(b) allowing for streamlined environmental review of future development projects. As explained in the CAP, the CAP meets all six requirements outlined in CEQA Guidelines Section 15183.5(b), Tiering and Streamlining the Analysis of Greenhouse Gas Emissions, and includes a Project Review Checklist for projects to demonstrate consistency with the CAP.[7]

Approach to Determining Significance

The significance of the Project-related GHG emissions under CEQA Appendix G Thresholds 1 and 2 is determined by evaluating the Project's compliance with regulations or requirements adopted to implement statewide, regional, or local plans for the reduction or mitigation of GHG emissions. Because the City's CAP has been ordered set aside as a result of litigation, this SEIR does not tier from or use the CAP's streamlined environmental review process. However, this SEIR analyzes the Project for consistency with the City's CAP as it existed at the time the applicant filed a preliminary application with the City in September 2023, as well as using other additional approaches to analyze the Project's potential to result in a significant GHG emissions impact.

The first approach used in this SEIR to determine whether the Project's GHG emissions are significant is to analyze the Project's consistency with the City's CAP,[8] which is accomplished through the CAP checklist. The first step in the CAP checklist evaluates General Plan land use consistency through three questions. The second step in the CAP checklist measures consistency; a project must demonstrate compliance with five required measures. The CAP also includes five voluntary project-level measures, which are not required of project applicants, but demonstrate support of implementation of the City's CAP.

The second approach used in this SEIR to determine whether the Project's GHG emissions are significant is to evaluate the Project's potential to conflict with state GHG reduction targets contained in the 2022 CARB Scoping

[7] See footnote 4 regarding litigation and the status of the City's CAP. The Project is not using the CAP's streamlined environmental review process; instead, the Project has committed to the preparation of this SEIR. This SEIR includes an analysis of the Project's consistency with the effective CAP as it existed at the time the project applicant filed a preliminary application with the City (in September 2023), while also undertaking a separate, stand-alone analyses of Project-generated construction and operational GHG emissions against other significance thresholds/criteria. Note the Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with the 2006 General Plan, including policies related to GHG emissions. .

[8] See footnote 7 above.

Plan Update,[9] Appendix D, Local Actions. Appendix D outlines local actions that residential and mixed-use projects can implement to address their largest sources of emissions including transportation electrification, VMT reduction, and building decarbonization. CARB identifies these three sources as "Priority Areas" given that they represent those with the highest GHG reduction potential and GHG reduction opportunities for which local governments and agencies have the most authority (CARB 2022b). On page 21 of Appendix D to the 2022 CARB Scoping Plan Update, CARB notes that the key attribute approach, along with other approaches in Appendix D, are recommendations only and are not requirements, indicating that they "do not supplant lead agencies' discretion to develop their own evidence-based approaches for determining whether a project would have a potentially significant impact on GHG emissions," (CARB 2022b) citing CEQA Guidelines Section 15064.4. CARB also points out that its recommendations "apply only to residential and mixed-use development project types," recognizing that "California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the state's GHG and regional air quality goals" (CARB 2022b).

The third approach used in this SEIR to determine whether the Project's GHG emissions are significant is to analyze qualitatively whether they have the potential to conflict with key strategies found in SCAG's 2020–2045 RTP/SCS.

Project-generated construction and operational GHG emissions are calculated and presented for disclosure purposes. The GHG emissions associated with implementation of the Project were estimated using industry standard and accepted software tools, techniques, and emissions factors, as described below.

The significance of the Project's potential GHG emission impacts under both CEQA Appendix G significance thresholds is based on the above-described three qualitative approaches.

Approach and Methodology

Project Design Features

The Project would implement operational project design features (PDFs) to reduce GHG emissions. The Project would also implement PDFs that reduce other potential environmental impacts, such as those relating to VMT, and therefore achieve direct or indirect air quality, GHG emissions, and energy co-benefits. Following each PDF is a note explaining if the PDFs are incorporated in this analysis as a quantitative feature or a qualitative/supporting feature.

PDF-AQ/GHG-1: Electric Vehicle Charging Infrastructure. The Project applicant or designee shall provide electric vehicle (EV) charging infrastructure that meets or exceeds 2022 California Green Building Standards Code Tier 2 standards to encourage use of EVs, consistent with Appendix D, Table 3, of the 2022 California Air Resources Board Scoping Plan. The Project provides a total of 23,772 parking spaces. Of that amount, the Project shall install 9,509 (or 40%) Level

[9] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "the Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009). Since that time (2009), however, the CARB Scoping Plan has been updated; the 2022 Scoping Plan Update includes Appendix D, Local Actions. Appendix D recommendations for project-level analyses can be applied for CEQA evaluations per the lead agencies' discretion. Specifically, Appendix D states that, "this section outlines three distinct approaches that lead agencies may consider for evaluating alignment of … residential and mixed-use development projects with the State's climate goals and, therefore, may have a less-than-significant impact on GHG emissions. These approaches are recommendations only and are not requirements. They do not supplant lead agencies' discretion to develop their own evidence-based approaches for determining whether a project would have a potentially significant impact on GHG emissions [Footnotes omitted]" (CARB 2022b).

2 240-volt (v) EV receptacles in Project parking structures and 3,566 (or 15%) Level 2 240 v EV supply equipment (or stations) in Project parking lots or remaining garages.

Quantitative. *Quantitative GHG emission reductions estimated.*

PDF-AQ/GHG-2: No Wood-Burning Fireplaces or Stoves and No Natural Gas Fireplaces. The Project applicant or designee shall install only electric fireplaces in residential units. Project residential units are prohibited from having wood-burning or natural gas fireplaces or wood-burning stoves.

Quantitative. *Quantitative GHG emission reductions estimated.*

PDF-AQ/GHG-3: Require All-Electric Development. All Project-related residential and non-residential development shall use all-electric appliances and end uses (including heating, ventilation, and air conditioning; water heating; and induction cooking) with the exception of restaurant land uses within the retail/food and beverage space (estimated at approximately 14,970 square feet of the Project's Town Center use of 49,900 square feet of commercial/retail use and 300,000 square feet of hotel use, totaling 349,900 square feet). Swimming pool and spa equipment and water heating shall also use electricity or solar instead of natural gas. (This project design feature is largely consistent with Appendix D, Table 3, of the 2022 California Air Resources Board Scoping Plan Update, which recommends all-electric appliance uses without any natural gas connections or any propane or other fossil fuels for space heating, water heating, or indoor cooking.)

Quantitative. *Quantitative GHG emission reductions estimated.*

PDF-AQ/GHG-4: Provision of Rooftop Solar. The Project applicant or designee shall provide rooftop photovoltaic (PV) solar panels on all residential and non-residential buildings in accordance with the requirements of the version of Title 24, Part 6, of the California Building Standards Code and California Green Building Standards Code in effect at the time of building permit application to provide an on-site source of renewable energy. The swimming pools' and spas' heating demand shall be served by a minimum of 50% solar water heating.

The following table identifies the building type, size, PV generation per square foot, and annual solar production (kilowatt-hours):

Building Type	Building Size	PV Generation per Square Foot (kWh/sf/year)	Annual Solar Production (kWh)
Multifamily low-rise	6,750,000	3.16	21,330,000
Multifamily midrise	6,750,000	3.79	25,582,500
Hotel	300,000	0.62	186,000
Elementary schools	192,000	3.03	581,760
Middle school	85,000	3.03	257,550
Restaurants	14,970	0.76	11,377

Building Type	Building Size	PV Generation per Square Foot (kWh/sf/year)	Annual Solar Production (kWh)
Retail	34,930	4.95	172,904
		Total	48,122,091

Note: kWh/sf/year = kilowatt-hour per square foot per year; kWh = kilowatt-hour.

Quantitative. *Quantitative GHG emission reductions estimated.*

PDF-AQ/GHG-5: LED Lighting. The Project applicant or designee shall install LED outdoor lighting in public spaces at the Project site in compliance with dark skies design considerations and policies of the City of Moreno Valley General Plan 2040 and shall install LED lighting in all Project residential units at the time of construction.

Qualitative/supporting. *Potential emission reductions are not estimated.*

PDF-AQ/GHG-6: Energy Efficient Appliances. The Project applicant or designee shall install ENERGY STAR-rated appliances for residential refrigerators, dishwashers, clothes washers, ceiling fans, and non-residential commercial refrigerators.

Quantitative. *Quantitative GHG emission reductions estimated.*

PDF-AQ/GHG-7: Energy Smart Meters. The Project applicant or designee shall install real-time energy smart meters within all residential and non-residential development.

Qualitative/supporting. *Potential emission reductions are not estimated.*

PDF-AQ/GHG-8: Cool Pavements. The Project applicant or designee shall install cool pavements to reduce the potential for the urban heat island effect. Outdoor pavements, such as internal walkways and patios, shall use paving materials with 3-year Solar Reflectance Index (SRI) of 0.28 or initial SRI of 0.33.

Qualitative/supporting. *There is no industry standard methodology available to estimate benefits.*

PDF-AQ/GHG-9: Solid Waste Reduction. The Project applicant or designee shall implement a solid waste reduction strategy that includes, at a minimum, storage areas for recyclables and green waste in new construction, and food waste storage (community composting zones). Solar-powered compacting trash and recycling containers shall be provided within the public areas of the Project site. The Project applicant or designee shall contract with a commercial solid waste company to provide, remove, and replace solid waste containers at all residential and commercial facilities.

Qualitative/supporting. *Potential emission reductions not estimated.*

PDF-AQ/GHG-10: Establish a Local Farmer's Market. The Project applicant or designee shall establish a local farmer's market for Project residents and surrounding area that provides local sources of food by the time or before Project development obtains certificate of occupancy for the 500th residential unit.

Qualitative/supporting. *Potential emission reductions are not estimated.*

PDF-AQ/GHG-11: Tree Planting. The Project applicant or designee shall include an urban and parkland tree planting program for carbon sequestration at a minimum of one tree per dwelling unit or a total of 30,000 trees planted at Project buildout. If a tree dies, the Project applicant or designee shall plant a new replacement tree as enforced through the covenants, conditions, and restrictions within 30 years of planting. Trees planted may include, but are not limited to, southern magnolia (*Magnolia grandiflora*), California sycamore (*Platanus racemosa*), American elm (*Ulmus americana*), slash pine *(Pinus elliotti)*, and white ash *(Fraxinus americana)*.

Quantitative. *Quantitative GHG emission reductions estimated.*

The Project applicant or designee shall include a water use efficiency and conservation plan consisting of the following, which are considered herein for GHG emission and energy reductions.

PDF-AQ/GHG-12: Water Use Efficiency and Conservation Plan. The Project applicant or designee shall implement a water use efficiency and conservation plan that includes the following minimum requirements:

Indoor Conservation Features and Operations:

- Install low-flow fixtures: In the residential units, install low-flow toilets at 1.28 gallons per flush, faucets at 1.2 gallons per minute, showerheads at 1.8 gallons per minute, and kitchen faucets at 1.8 gallons per minute. In common areas, install faucets at 0.5 gallons per minute and urinals at a max of 0.25 gallons per minute/flush. (These fixtures use less water while maintaining efficient performance.)
- Install dual-flush toilets: These toilets offer two flush options—one for liquid waste less than 1 gallon per minute and another for solid waste at 1.28 gallons per minute. (This allows the appropriate use of water for flushing needs.)
- Use water-efficient appliances: The Project applicant or designee shall install energy-efficient and water-saving appliances like dishwashers and washing machines with the ENERGY STAR label only.
- Implement hot water recirculation system: The Project applicant or designee shall implement a recirculation system for hot water systems to ensuring low to no wasted water while waiting for water to reach the desired temperature.
- Incorporate leak detection on each residential building. Leak detection will be incorporated into residential structures to detect water leaks typical of residential uses such as irrigation and plumbing.
- Capture and reuse heating, ventilation, and air conditioning condensation: The Project applicant or designee shall direct condensation from air conditioning units to water plants or for other non-potable uses.
- Implement good housekeeping and regular maintenance: The Project applicant or designee shall regularly (daily, weekly, monthly, etc. as applicable) check and maintain plumbing fixtures, irrigation systems, and appliances to ensure they are functioning efficiently and not wasting water.

Outdoor Conservation Features and Operations:

- **Install only "Smart Irrigation Systems" for community landscaping:** The Project applicant or designee shall utilize smart sprinkler systems that adjust watering schedules based on weather conditions, soil moisture, and plant needs to avoid overwatering or wasteful watering. The Project applicant or designee shall also incorporate seasonal specific controls to ensure watering occurs during the most efficient times of day.
- **Install adjustable water pressure regulator**: The Project applicant or designee shall install pressure regulators to maintain optimal water pressure, preventing overuse and leaks.
- **Incorporate leak detection into each master landscape meter complex.** Leak detection will be incorporated into residential structures to detect water leaks from landscaping.
- **Include drought-tolerant landscaping**: The Project applicant or designee shall include native and drought-tolerant vegetation that requires less water to thrive and is known to survive in the greater Moreno Valley area. The Project applicant or designee shall replace drought-tolerant landscaping if it dies through enforceable Project covenants, conditions, and restrictions (CC&Rs) for 30 years after initial planting.
- **Harvest and reuse rainwater and drainage water:** The Project's lake shall be part of a water retention and reuse program.
- **Use permeable pavement surfaces:** The Project applicant or designee shall use permeable materials in parking areas, internal walkways, and public areas. (These surfaces will allow water to infiltrate the ground rather than running off, reducing runoff and promoting groundwater recharge.)
- **Include community education and outreach:** The Project applicant or designee shall educate employers, employees, and residents about water conservation practices and encourage them to implement mindful water usage habits through enforceable Project CC&Rs.
- **Place educational signage:** The Project applicant or designee shall place informational signs and notices at appropriate locations on the Project site to encourage water-saving behaviors among residents and guests.

Partially Quantitative. *Quantitative GHG emission reductions estimated as incorporated into the Project-specific energy use estimates. However, water use reductions associated with the above features were limited to the residential land uses; all other land uses water use were not adjusted to account for water efficient features.*

PDF-AQ/GHG-13: Use Recycled Water for Irrigation. The Project applicant or designee shall use recycled water for irrigation areas including the school irrigated areas, Town Center irrigation, parks, parkways, and urban landscape.

Quantitative. *Quantitative GHG emission reductions estimated as incorporated into the mitigation module in CalEEMod and based on Project-specific recycled water estimates.*

PDF-AQ/GHG-14: Use of Local Well Water for Lake. The Project applicant or designee shall use local well water as the primary source to meet the lake initial fill and refilling needs. A minimum of 200-acre feet per year of local water will be used for the lake at Project buildout.

Quantitative. *Quantitative GHG emission reductions estimated using a spreadsheet model (outside of CalEEMod).*

PDF-AQ/GHG-15: Integrated Stormwater System. The Project applicant or designee shall include an integrated stormwater, flood control and erosion control lake system with bio basins and native plant restoration areas that will increase groundwater percolation and downstream water quality.

Qualitative/supporting. *Potential emission reductions are not estimated.*

The Project applicant or designee shall include an extensive TDM program consisting of the transportation-related PDFs listed below; the Project applicant or designee shall also host an on-site TDM coordinator at the Project's leasing center to implement such TDM measures.

Residential Trip Reduction Features

PDF-TRANS-1: Community-Based Travel Planning. The Project's residential uses shall implement community-based travel planning (CBTP). CBTP is a residential-based approach to outreach that provides households with customized information, incentives, and support to encourage the use of transportation alternatives in place of single occupancy vehicles, thereby reducing household vehicle miles traveled and associated greenhouse gas emissions. Implementation of this feature in the Project shall consist of teams of trained travel advisors visiting all households within the Project upon move-in and having tailored conversations about residents' travel needs and educating residents about the various transportation options available to them.

Quantitative. *Quantitative GHG emission reductions are estimated in as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-2: Unbundle Residential Parking Costs from Property Costs. The Project applicant or designee shall unbundle, or separate, a resident's parking costs from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost. On the assumption that parking costs are passed through to the vehicle owners/drivers utilizing the parking spaces, this feature results in decreased vehicle ownership and, therefore, a reduction in vehicle miles traveled and greenhouse gas emissions. Parking costs must be passed through to the vehicle owners/drivers utilizing the parking spaces for this feature to result in decreased vehicle ownership. Implementation of this feature in the Project shall consist of parking spaces costing approximately $100–$150 as a separate monthly cost from the rental of a unit. (This required feature is consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends that "multifamily residential development … [require] parking costs to be unbundled from costs to rent or own a residential unit.")

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

Employee Commute Trip Reduction Features

PDF-TRANS-3: Commute Trip Reduction (CTR) Program Marketing. The Project applicant or designee shall implement a marketing strategy to promote the Project site employer's CTR program. Information sharing and marketing shall promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing vehicle miles traveled and greenhouse gas emissions.

Implementation of this feature shall consist of the following performance criteria:

- On-site or online commuter information services
- Employee transportation coordinators
- On-site or online transit pass sales
- Guaranteed ride home service

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-4: Rideshare Program. The Project applicant or designee shall implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Ridesharing encourages carpooled vehicle trips in place of single-occupied vehicle trips, thereby reducing the number of trips, vehicle miles traveled, and greenhouse gas emissions.

Implementation of this feature in the Project shall consist of promoting the following required performance criteria:

- Designating a certain percentage of desirable parking spaces for ridesharing vehicles
- Designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles
- Providing an app or website for coordinating rides

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-5: End-of-Trip Bicycle Facilities. The Project applicant or designee shall install and maintain end-of-trip bicycle facilities. Per CAPCOA's 2021 GHG Handbook, end-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing vehicle miles traveled and greenhouse gas emissions.

Implementation of this required feature will be sized to encourage bicycling by providing facilities to accommodate 10%–20% of the forecasted 804 employees staffed daily on the Project site. Implementation of this feature shall also be regularly maintained by the Project

applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-6: Discounted Transit Program for Work Trips. The Project applicant or designee shall provide subsidized, discounted, or free transit passes for employees through the permanent transportation management association referenced in PDF-TRANS-4. Per CAPCOA's 2021 GHG Handbook, reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced vehicle miles traveled and thus a reduction in greenhouse gas emissions. The Project design shall ensure accessibility either within 1 mile of high-quality transit service (rail or bus with headways of less than 15 minutes), 0.5 miles of local or less frequent transit service, or along a designated shuttle route providing last-mile connections to rail service. With the availability of bikeshare service, the Project site may be located up to 2 miles from a high-quality transit service.

Implementation of this feature in the Project shall be provided by the Project applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4. Transit service shall be expanded with implementation of the Project to the following:

- Bus Rapid Transit is proposed on Alessandro Boulevard that would provide high-quality transit service within 0.5 miles of the Project.
- Bus service will provide direct connections to the Moreno Valley/March Field Metrolink Train Station located approximately 5 miles west of the Project.
- Bikeshare will be available to support the discounted transit program, including a non-electric bike share program with a minimum of 150 bikes and an electric bike share program with a minimum of an additional 150 bikes.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

Project-Generated Trip Reduction Features

The Project applicant or designee shall implement on-site micro-mobility and connections to adjacent uses, such as schools and medical centers, with the following PDFs.

PDF-TRANS-7: Non-Electric Bikeshare Program. The Project applicant or designee shall establish a non-electric bikeshare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. The bikeshare program shall provide users with on-demand access to non-electric bikes for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to bicycles, displacing vehicle miles traveled and thus reducing greenhouse gas emissions. This program shall provide 25 electric bikes at certificate of occupancy of each 2,500th

unit, and a minimum of 150 such bikes located within 0.5 miles of the Project's mobility hub to be maintained by the Project applicant or designee.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-8: Electric Scootershare Program. The Project applicant or designee shall establish the scootershare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. Scootershare programs provide users with on-demand access to electric scooters for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to scooters, displacing vehicle miles traveled and thus reducing greenhouse gas emissions.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-9 through PDF-TRANS-12, described below, will facilitate transit network, service frequency, and facilities and thereby reduce Project generated VMT.

PDF-TRANS-9: Extend Transit Network Coverage. The Project applicant or designee shall coordinate with the Riverside Transit Agency to update bus service routes and service times to serve the new community through the permanent transportation management association referenced in PDF-TRANS-4. This would extend transit network coverage to existing and future employment centers, such as the World Logistics Center. Additionally, this would include extending transit hours for all shift times, such as the midnight shift change at the World Logistics Center. Per CAPCOA's 2021 GHG Handbook, this feature includes expansion of the local transit network by either adding or modifying existing transit service or extending the operation hours to enhance the service near the Project site. Starting services earlier in the morning and/or extending services to late-night hours can accommodate the commuting times of alternative-shift workers. This encourages the use of transit and therefore reduces vehicle miles traveled and associated greenhouse gas emissions.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-10: Increase Transit Service Frequency. The Project applicant or designee shall coordinate with the Riverside Transit Agency (RTA) to update bus service routes and service times to serve the new community. This will include working with RTA to establish Bus Rapid Transit on Alessandro Boulevard and providing direct bus connections to the Moreno Valley/March Field Metrolink Train Station. Per CAPCOA's 2021 GHG Handbook, increased transit frequency reduces waiting and overall travel times, which improves the user experience and increases the attractiveness of transit service. This results in a mode shift from single occupancy vehicles to transit, which reduces vehicle miles traveled and associated greenhouse gas emissions.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-11: Implement Bus Rapid Transit (BRT). The Project applicant or designee shall support the City of Moreno Valley and the Riverside Transit Agency plans for BRT along Alessandro Boulevard. Implementation of this feature would include improved travel times from transit signal prioritization, increased service frequency, and a full-featured BRT service operating on a fully segregated running way with a specialized vehicles, attractive stations, and efficient fare collection practices.

Per CAPCOA's 2021 GHG Handbook, this feature will convert an existing bus route to a BRT system. BRT includes the following additional components, compared to traditional bus service: exclusive right-of-way (e.g., busways, queue jumping lanes) at congested intersections, increased limited-stop service (e.g., express service), intelligent transportation technology (e.g., transit signal priority, automatic vehicle location systems), advanced technology vehicles (e.g., articulated buses, low-floor buses), enhanced station design, efficient fare-payment smart cards or smartphone apps, branding of the system, and use of vehicle guidance systems. BRT can increase the transit mode share in a community due to improved travel times, service frequencies, and the unique components of the BRT system. This mode shift reduces vehicle miles traveled and the associated greenhouse gas emissions.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-12: Mobility Hub. The Project applicant or designee shall develop a state-of-the-art Mobility Hub at or near the Project site to bolster the effectiveness of active transportation options (mobility hubs are places of connectivity that bring together multiple modes of travel and strengthen first-mile/last-mile connections to transit). Mobility hubs provide a centralized location for non-automotive transportation modes to connect users to their destinations. There are limited benefits to implementing a stand-alone mobility hub, as the facility is meant to promote and support alternative transportation modes. Mobility hubs should be supplemented with additional strategies or programs that provide increased public transit, bicycle, and pedestrian access and improvements. Implementation of the Mobility Hub shall require coordination with the Riverside Transit Agency, Metrolink, and the City of Moreno Valley. Though the proposed Mobility Hub is not included in CAPCOA's 2021 GHG Handbook, many of the characteristics of the Mobility Hub (increased transit accessibility, increased bicycling accessibility) are part of other transportation demand management (TDM) strategies outlined in CAPCOA. The Mobility Hub is anticipated to strengthen the effectiveness of other proposed TDM strategies. However, to provide a conservative approach to trip generation, additional reductions were not applied for the Mobility Hub in the vehicle miles traveled reduction calculated for the Project.

Quantitative. *Quantitative GHG emission reductions are estimated as incorporated into the Project-specific VMT estimates.*

PDF-TRANS-13 through PDF-TRANS-15, described below, will further reduce Project generated VMT but are not calculated within the analysis.

PDF-TRANS-13: Electric Bikeshare Program. The Project applicant or designee shall establish an electric bikeshare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. The bikeshare program shall provide users with on-demand access to bikes for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to bicycles, displacing vehicle miles traveled and thus reducing greenhouse gas emissions. Like the non-electric bike program in PDF-TRANS-7, this program shall provide an additional 25 electric bikes at certificate of occupancy of each 2,500th unit, and a minimum of an additional 150 such bikes located within 0.5 miles of the Project's mobility hub to be maintained by the Project applicant or designee.

Qualitative/supporting. *Potential emission reductions are not estimated.*

PDF-TRANS-14: Provide Shuttle Service to Employment Centers. The Project applicant or designee shall provide shuttle service to existing and future employment centers, including the World Logistics Center. Such service shall be provided at the completion of the 2,500th unit, and be located within 0.5 miles of the Project's mobility hub.

Qualitative/supporting. *Potential emission reductions are not estimated.*

PDF-TRANS-15: Implement Market Price Public Parking. The Project applicant or designee shall install parking meters or implement a residential parking permit program that prices all on-street public parking in the Project's Town Center at market rates. Pricing on-street parking helps incentivize shifts to alternative transportation modes, decreasing total vehicle miles traveled to and from the priced areas.

Qualitative/supporting. *Potential emission reductions are not estimated.*

The Project includes the following land use planning and design PDFs.

PDF-LU-1: Mixed-Use Project Design. The Project design shall integrate a mix of residential, commercial, retail, entertainment, employment, educational, and recreational uses that capture and reduce vehicular trips and associated environmental impacts, including greenhouse gas emission reductions. The Project also shall include reduced parking requirements in its regulatory Specific Plan as a vehicle miles traveled (VMT) reduction tool, consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends reduced parking requirements to reduce VMT.

Qualitative/supporting. *Potential emission reductions not estimated as part of the "with PDF scenario."*

PDF-LU-2: Provision of Urban Core. The Project shall create an urban core that provides a wide array of residential units, including workforce housing, oriented toward the adjacent, existing regional medical centers, the community college, and other nearby job centers to further reduce vehicle trips and associated environmental impacts.

Qualitative/supporting. *Potential emission reductions not estimated as part of the "with PDF scenario."*

PDF-LU-3: Short Walkable Blocks. The Project design shall be composed of short, walkable blocks of up to 600 feet in length.

Quantitative. *Quantitative GHG emission reductions are estimated.*

PDF-LU-4: Increased Residential Density. The Project shall increase residential density, leading to shorter vehicle trips and fewer single-occupancy vehicle trips than surrounding lower-density developments. The increase in residential density in this infill Project site surrounded by existing urban uses and served by existing utilities and essential public services (e.g., transit, streets, water, and sewer) reduces vehicle miles traveled (VMT). The residential increase is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends locating residential and mixed-use development projects on infill sites surrounded by urban uses, existing utilities, and essential public services as a means of reducing VMT. The increase in residential density is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends transit-supportive densities at a minimum of 20 residential dwelling units per acre to reduce VMT. The Project site is in proximity to existing transit options, which is also consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update.

Quantitative. *Quantitative GHG emission reductions are estimated.*

PDF-LU-5: Walkable/Bikeable Community. The Project site is located in an area with average vehicle miles traveled below that of the City of Moreno Valley and the region. The Project design shall, and does, provide a walkable and bikeable community proximate to major area job centers, including World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, University of California Riverside, Moreno Valley College, and regional and local shopping and commercial centers, which would allow residents to live and work locally, cutting commute times, reducing vehicle trips, reducing greenhouse gas emissions, and improving air quality. An efficient transportation network is a central tenet of the Project, which will provide a tram connection to job centers, enhanced transit, pedestrian and bicycle routes, ridesharing, non-electric bikes, electric bikes, electric scooters, a mobility hub, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures.

Qualitative/supporting. *Potential emission reductions are not estimated beyond what is assumed in the Project-specific VMT estimates.*

PDF-LU-6: Transit Benefits. The Project site is located along major transit routes, and the Project applicant or designee shall support frequent and reliable transit service and other multi-modal transportation measures, including walking and biking. The Riverside Transit Agency (RTA) provides existing bus routes proximate to the site. Route 31 runs along Nason Street to the Riverside University Medical Center. Route 20 also serves the site along Alessandro, Nason, and Moreno Beach Dr. to the Riverside University Medical Center, Kaiser Permanente Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to

Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across Interstate 215. The Project applicant or designee shall coordinate with the RTA with respect to transit service and other multi-modal transportation options related to the Project to reduce vehicle miles traveled.

Qualitative/supporting. *Potential emission reductions are not estimated beyond what is assumed in the Project-specific VMT estimates.*

PDF-LU-7: Integrated Design. The Project plans shall include an integrated, connected town center neighborhood intended to maximize walkability, bike-ability, and transit use as part of an efficient transportation network in the City of Moreno Valley. The Project incorporates transit, pedestrian, and bicycle routes and other multi-modal transportation programs and technologies to move residents efficiently to and from major job centers and reduce the need for on-site parking. Extensive parks, trails, the lake promenade and open space features, sidewalks, internal walkways, and roadways on site shall be required to encourage biking and walking. Trees and landscaping shall be used throughout the Project site, along streets, and along multi-use trails and sidewalks to improve the pedestrian experience and have a cooling effect to further promote walking and biking. Such required design ensures reductions in vehicle miles traveled and greenhouse gas emissions.

Qualitative/supporting. *Potential emission reductions are not estimated beyond what is assumed in the Project-specific VMT estimates.*

PDF-LU-8: Other Integrated Project Features. The lake promenade and integrated trail system shall be required to connect the residential, retail, restaurant, recreational, hotel, and other uses, providing a route that users can walk and bike along. Sidewalk improvements shall be provided throughout the community to promote walking. Bike lanes and shared-use streets shall be incorporated through the Specific Plan area to complement the new and existing development in a way that promotes the human scale. These bike lanes shall connect to existing Class II bike lanes on Cactus Ave., Nason Street, Iris Ave, Lasselle Street, and John F. Kennedy Dr.

Qualitative/supporting. *Potential emission reductions are not estimated beyond what is assumed in the Project-specific VMT estimates.*

PDF-LU-9: Complete Streets. Complete streets, which are local roads and streets that adequately accommodate the needs of bicyclists, pedestrians, and transit riders, as well as motorists, shall be provided to promote pedestrian and bicycle use through the incorporation of design features such as multi-use trails and sidewalks, crosswalks, shared roads, landscaping, and pedestrian bridges across arterials and the on-site drainage.

Qualitative/supporting. *Potential emission reductions are not estimated beyond what is assumed in the Project-specific VMT estimates.*

PDF-LU-10: Traffic Calming. Traffic calming design of neighborhoods streets shall include street chokers (curb extensions that narrow a street by widening the sidewalks or planting strips, effectively creating a pinch point along the street), crosswalks, roundabouts landscaped medians, and shared street design to promote safer streets.

Qualitative/supporting. *Potential emission reductions are not estimated beyond what is assumed in the Project-specific VMT estimates.*

PDF-LU-11: Roundabouts. The Project shall include roundabouts as a means of traffic calming and GHG reduction.

Qualitative/supporting. *Potential emission reductions are not estimated beyond what is assumed in the Project-specific VMT estimates.*

All PDFs shall be City-imposed, enforceable Project conditions of approval to ensure they are implemented during construction and operation of the Project and to ensure future enforcement.

Construction

Construction Scenario Assumptions

For purposes of estimating Project emissions, it is assumed that construction of Project would commence in January 2025. For emissions modeling purposes, construction was broken down into six model runs by phase as follows:

- Phase 1, 2025–2026
- Phase 2, 2027–2028
- Phase 3, 2029–2030
- Phase 4, 2031–2032
- Phase 5, 2033–2034
- Phase 6, 2035–2036

Each phase includes development of 2,500 residential units (1,250 low-rise residential units and 1,250 mid-rise residential units) along with surface parking spaces, parking structures, and paved surfaces for circulation. All other land uses, including retail, educational, and recreational land uses, were allocated to the six phases based on best available information. Each of the six phases follow a similar construction schedule that includes site preparation, grading, and utilities; paving for circulation; pavement striping (architectural coating) (for circulation); building construction for residential and building construction for the applicable non-residential development like schools and parks; architectural coating for residential and for the applicable non-residential development; paving for parking; and pavement striping (architectural coating) for parking. Each phase begins in January of one year and ends in December 2 years later.

For each phase, the land use breakdown assumed in CalEEMod is presented in a table in Appendix D. Construction scenario assumptions, including phase start and end date, vehicle trips (worker, haul truck, vendor truck, and on-site trucks) and equipment (type, quantity, and usage hours per day) are presented in a separate table in Appendix

D. Appendix D present the construction scenario assumptions used for estimating Project-generated emissions in CalEEMod for the Project.

No demolition is required for the Project as there are no structures on the Project site. As the Project site has been previously graded, no import or export of material is anticipated to be required. Vendor trucks listed in earth-moving phases (i.e., site preparation, grading, utilities) represent water trucks.

Land Use Change (Stored Carbon Loss)

Land use development has the potential to result in loss of sequestered carbon that would result from removal of trees or vegetation on site during construction. The Project site is currently graded with no trees or substantial vegetation that would result in meaningful carbon storage. As such, this GHG analysis does not include a calculation of the existing vegetation-related carbon loss.

Operation

Operational Emission Source Assumptions

Project-generated operational criteria air pollutant emissions were estimated for mobile, area, energy, water, waste, and refrigerant sources using CalEEMod and based on Project-specific values and CalEEMod default values by land use type and quantity when Project-specifics are not available. Table 4.8-2 provides a summary of the land use inputs included in the CalEEMod modeling.

Table 4.8-2. CalEEMod Land Use Development Summary for the Project under Buildout

Project Component	CalEEMod Land Use Type	Land Use Amount (Size)	Land Use Size Metric	Building Square Footage	Land Use Acreage
Residential	Apartments Mid Rise	7,500	DU	7,425,000	114.76
Residential	Apartments Low Rise	7,500	DU	7,425,000	223.30
Retail	Regional Shopping Center	34.93	KSF	34,930	12.98
Recreational	High Turnover (Sit Down Restaurant)	14.97	KSF	14,970	6
Recreational	Hotel	300	Room	300,000	2.25
Recreational	City Park (Active)	25	Acre	0	25
Recreational	City Park (Lake Promenade)	15	Acre	0	15
Recreational	User Defined (Lake)	40	Acre	0	40
Recreational	Recreational Swimming Pool (Pools and Spas)	40.8	KSF	0	0
Educational	Elementary School	3,995	Student	192,000	30
Educational	Middle School	2,049	Student	85,000	10
Parking	Other Asphalt Surface	30	Acre	0	30

Table 4.8-2. CalEEMod Land Use Development Summary for the Project under Buildout

Project Component	CalEEMod Land Use Type	Land Use Amount (Size)	Land Use Size Metric	Building Square Footage	Land Use Acreage
Parking	Enclosed Parking Structure (Mid Rise Parking)	11,847	Space	4,738,800	27.71
Parking	Parking Lot (Low Rise Parking)	11,925	Space	0	109.50

Source: Appendix D.
Notes: du = dwelling unit; ksf = 1,000 square feet.

In addition to full buildout of the Project, five interim operational years were modeled to estimate Project-generated emissions as the Project is developed and implemented. The interim scenarios include the following with land use assumption details provided in Appendix D:

- Phase 1 (2027)
- Phases 1 and 2 (2029)
- Phases 1 through 3 (2031)
- Phases 1 through 4 (2033)
- Phases 1 through 5 (2035)

GHG emissions from the operational phase of the Project were estimated primarily using CalEEMod Version 2022.1.1.20. An operational year of 2037 was assumed consistent with completion of project construction.

The calculation of mobile, area, energy, water, waste, and refrigerant GHG emissions is explained below.

Mobile Sources

Mobile sources for the Project would be residents, visitors, customers, and employees traveling to and from the Project site. CalEEMod was used to estimate mobile source emissions for the Project under buildout of the Project in 2037, as well as additional interim operational scenarios; however, Project-specific input values were used where available, as explained below.

CalEEMod includes multiple variables for estimating project-generated traffic and associated VMT. Project-generated weekday, Saturday, and Sunday trips, as well as Project-generated VMT per weekday, Saturday, and Sunday, were calculated outside of CalEEMod based on the Trip Generation Assessment, Transportation Impact Assessment prepared for the Project by Fehr & Peers and VMT estimates for emission modeling purposes as provided by Fehr & Peers, and inputted into CalEEMod (Appendices K1 and K2). Trips per weekday and VMT per weekday were specifically estimated for the Project at buildout. To estimate Saturday and Sunday trips, the proportion of CalEEMod default Saturday and Sunday trip rates to weekday trip rates were applied by each land use to account for the variability in weekend trips (e.g., Saturday trips increase compared to weekday for retail; however, elementary and middle school trips reduce). To estimate weekend VMT, the estimated Saturday and Sunday trips were multiplied by the average trip length. All average trip lengths assume full buildout of the World Logistics Center (WLC) in 2045, which roughly equates to 22,000 employees, as interpolated appropriately for each interim

operational year based on WLC anticipated buildout. Annual trips and VMT were then calculated using CalEEMod based on the daily estimates.[10] Because an average trip length was applied in the analysis that included an aggregate of shorter- and longer-trips, no diverted or pass-by trips were assumed.

CalEEMod default emission factors representing the vehicle mix and emissions for 2037 were used for buildout of the Project, and for each interim scenario, the appropriate year was selected. As represented in CalEEMod, motor vehicles may be fueled with gasoline, diesel, or alternative fuels such as electricity.

Regulatory measures related to mobile sources include AB 1493 and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles that are primarily used for noncommercial personal transportation in the state. In addition, the NHTSA and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel economy improvements was evaluated using the CalEEMod emission factors for motor vehicles to the extent it was captured in CalEEMod 2022.1.1.20, which is based on EMFAC2021.

The Project includes multiple improvements and site-related features that would result in a reduction in trips and VMT and associated emissions, as outlined in PDF-TRANS-1 through PDF-TRANS-12. Because VMT was estimated with and without PDFs, no traffic-related reductions were taken in CalEEMod mitigation module; they were instead incorporated into the VMT assumptions.

Under mandatory provisions of CALGreen, the Project would include EV capable spaces (2,377), EV ready spaces (5,943), and EV chargers (1,189) at full buildout in 2037. The Project also includes installation of EV chargers per PDF-AQ/GHG-1, which requires the Project to provide EV charging infrastructure that meets or exceeds the 2022 CALGreen Voluntary Tier 2 standards. With implementation of PDF-AQ/GHG-1, the Project at full buildout would provide 9,509 (or 40%) Level 2 240-volt electric vehicle receptacles[11] in Project parking structures and 3,566 (or 15%) Level 2 240-volt electric vehicle supply equipment (or stations[12]) in Project parking lots or remaining garages.

While the Project's provision of EV receptacles facilitates the transition towards battery electric and hybrid vehicles, no GHG emission reductions were calculated or attributed to that commitment in the PDF. This is a conservative parameter in the emissions estimation methodology, and emission reductions from the installation of EV receptacles may be greater than reported herein.

As to the Project's provision of EV chargers, there are various approaches to estimating GHG emission reductions from providing EV chargers. The method outlined in the CAPCOA Handbook for Analyzing GHG Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook) (CAPCOA 2021), Measure T-14, was used to estimate the GHG benefit from installing 3,566 EV chargers at Project buildout.

10 CalEEMod only allows the user to input trip rates, trip lengths, and land use metrics to two decimal places. Therefore, there is the potential for rounding to result in slightly different results. However, the margin of error associated with rounding to two decimal places (less than 0.1%) would not substantially change the estimated emissions or the significance conclusions.

11 As defined by the 2022 CALGreen Code, a "Low Power Level 2 EV Charging Receptacle" is a 208/240 Volt 20-ampere minimum branch circuit and a receptacle for use by an EV driver to charge their electric vehicle or hybrid electric vehicle (CALGreen 2023).

12 As defined by the 2022 CALGreen Code, a "Level 2 EV Supply Equipment (EVSE)" is the 208/240 Volt 40-ampere branch circuit, and the electric vehicle charging connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises and the electric vehicle (CALGreen 2023).

Measure T-14, Provide Electric Vehicle Charging Infrastructure, estimates GHG emission reductions associated with plug-in hybrid EVs, but does not estimate GHG emission reductions associated with battery EVs, which would also use the EV chargers. The Measure T-14 description provided by CAPCOA states that this measure "will enable drivers of PHEVs [plug-in hybrid EVs] to drive a larger share of miles in electric mode (eVMT), as opposed to gasoline-powered mode, thereby displacing GHG emissions from gasoline consumption with a lesser amount of indirect emissions from electricity" (CAPCOA 2021). Because the CAPCOA method does not estimate GHG reduction potential from the EV chargers supplying power to battery EVs and the associated miles driven by battery EVs instead of gasoline, diesel, or natural gas fueled vehicles, or how the supply of additional EV chargers in a local or regional network may incentivize transition to EVs, the CAPCOA method is considered conservative (i.e., actual GHG emission reductions may be greater than presented herein).

- **Project without PDF:**
  - ***Trip rates and VMT.*** Trips and VMT were estimated based on data provided by Fehr & Peers for the Project assuming that PDFs were not incorporated and not taking credit for anticipated internalization of trips associated with the mixed-use nature of the Project. Key inputs are provided below for each operational run:
    - Phase 1 (2027): 17,727 trips per weekday, 9.82 miles average trip length, 174,080 VMT per weekday
    - Phases 1 and 2 (2029): 34,474 trips per weekday, 9.66 miles average trip length, 333,019 VMT per weekday
    - Phases 1 through 3 (2031): 56,153 trips per weekday, 9.49 miles average trip length, 532,888 VMT per weekday
    - Phases 1 through 4 (2033): 73,524 trips per weekday, 9.33 miles average trip length, 685,978 VMT per weekday
    - Phases 1 through 5 (2035): 87,876 trips per weekday, 9.16 miles average trip length, 804,943 VMT per weekday
    - Full buildout (2037): 105,000 trips per weekday, 9.00 miles average trip length, 944,995 VMT per weekday
  - ***Fleet Mix.*** Default CalEEMod values were applied.
  - ***Vehicle Emission Factors.*** Default CalEEMod values were applied.
  - ***EV Chargers:*** 1,189 EV chargers assumed at buildout.

- **Project with PDF:**
  - ***Trip rates and VMT.*** Trips and VMT were estimated based on data provided by Fehr & Peers for the Project assuming that PDF-TRANS-1 through PDF-TRANS-12 are incorporated. Anticipated internalization of trips associated with the mixed-use nature of the Project was not included. Key inputs are provided below for each operational run:
    - Phase 1 (2027): 11,718 trips per weekday, 9.82 miles average trip length, 115,073 VMT per weekday
    - Phases 1 and 2 (2029): 28,454 trips per weekday, 9.66 miles average trip length, 274,865 VMT per weekday
    - Phases 1 through 3 (2031): 50,135 trips per weekday, 9.49 miles average trip length, 475,778 VMT per weekday

  - Phases 1 through 4 (2033): 67,516 trips per weekday, 9.33 miles average trip length, 629,927 VMT per weekday
  - Phases 1 through 5 (2035): 81,878 trips per weekday, 9.16 miles average trip length, 750,007 VMT per weekday
  - Full Buildout (2037): 98,989 trips per weekday, 9.00 miles average trip length, 890,901 VMT per weekday
- ***Fleet Mix.*** Default CalEEMod values were applied.
- ***Vehicle Emission Factors.*** Default CalEEMod values were applied.
- ***EV Chargers:*** 3,566 EV chargers assumed at buildout.

Area Sources

Hearths generate GHG emissions through the use of energy to provide localized heat. Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with hearths and landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

- **Project without PDF:**
  - ***Hearths.*** Default CalEEMod values included wood-burning fireplaces and natural gas fireplaces. All wood burning fireplaces were assumed to be natural gas fireplaces instead. The default assumption of the amount of units without fireplaces remained the same. Default CalEEMod values that assumed wood-burning stoves were adjusted to assume zero wood burning stoves.
  - ***Landscape Equipment.*** Default CalEEMod values were applied.

- **Project with PDF:**
  - ***Hearths.*** PDF-AQ/GHG-2 was assumed. All fireplaces were assumed to be electric. Default CalEEMod values that assumed wood-burning stoves were adjusted to assume zero wood burning stoves.
  - ***Landscape Equipment.*** Default CalEEMod values were applied.

Energy Sources

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building; the building energy use emissions do not include street lighting.[13] GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions.

For the without PDF analysis, GHG emissions associated with the natural gas and electricity usage associated with the Project were calculated by CalEEMod using default parameters. For the with PDF analysis, energy use was specifically estimated for the Project as provided in the Annual Energy Use Calculations prepared for the Project by VCA Green (Appendix D) with the exception of parking lot and parking structure land uses, which used default CalEEMod values.

[13] The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.

The energy report also estimated PV by land use. For interim operational years, the energy use rates and PV generation rates, along with Project buildout metrics, were used to estimate the energy use for that year.

The CalEEMod default energy intensity factors (CO_2, CH_4, and N_2O mass emissions per kilowatt-hour) for Moreno Valley Electric Utility (MVU) were adjusted based on the value for MVU's 2021 Power Content Label as the baseline and projected energy mix pursuant to the RPS requirements applicable for the operational year, as follows:

- Phase 1 (2027): 44% renewables assumed per SB 100
- Phases 1 and 2 (2029): 52% renewables assumed per SB 100
- Phases 1 through 3 (2031): 60% renewables assumed per SB 100
- Phases 1 through 4 (2033): 60% renewables assumed per SB 100
- Phases 1 through 5 (2035): 60% renewables assumed per SB 100
- Full buildout (2037): 90% renewables assumed per SB 1020

The Project would comply with the current energy code requirements regarding battery energy storage, which would apply to the Project's non-residential land uses and multifamily residential buildings that are four-stories or greater. Battery requirements are based on solar PV requirements. Based on the best available information at this time, the amount of battery storage required for solar PV provided at the Project is estimated to be the following:

- Multi-family residential building three stories or less: 14,807 kilowatts (kW) solar PV, 0 kilowatt-hours (kWh) battery
- Multi-family residential building four stories or greater: 14,918 kW solar PV, 16,441 kWh battery
- Hotel: 192 kW solar PV, 80 kWh battery
- Elementary Schools: 313 kW solar PV, 603 kWh battery
- Middle School: 139 kW solar PV, 267 kWh battery
- Retail: 102 kW solar PV, 112 kWh battery
- Restaurant: 7 kW solar PV, 7 kWh battery

No quantitative credit for battery storage was included in the emissions analysis under either without or with PDF scenarios.

- **Project without PDF:**
  - ***Energy.*** Default CalEEMod values were applied which includes natural gas and electricity use. Energy use associated with the swimming pools and lake were added as no default CalEEMod values were available. The lake energy demand is associated with a recirculation pump, an irrigation pump, and an aeration air compressor, which would consume electricity (no natural gas usage). The swimming pools and spas energy demand is associated with a pump, which would be electric-powered, and heating, which would be powered by natural gas under the without PDF scenario. The following was assumed for full buildout of the Project in 2037:
    - ***Total annual electricity use:*** *124,196,354 kWh*
    - ***Total annual natural gas:*** *246,088,681 kBtu*
    - ***Total annual PV generation:*** *0 kWh*

- **Project with PDF:**
  - ***Energy.*** Project-specific energy values were inputted with the exception of parking lot and parking structure land uses, which were based on default CalEEMod values. PDF-AQ/GHG-3 was assumed whereas all residential and non-residential land uses were assumed to be 100% electric with the exception of the restaurant land use (represented in CalEEMod as "High Turnover (Sit Down Restaurant)"), which included project-specific electricity and natural gas use. PDF-AQ/GHG-4" also was assumed which includes provision of rooftop solar. PDF-AQ/GHG-6 requiring energy efficient appliances was also assumed in the CalEEMod mitigation module for residential and non-residential land uses. Lake electricity demand was assumed to be the same as the Project without PDF scenario. The swimming pools and spas energy demand, including heating, would be powered by electricity or solar water heating; for purposes of the implementing PDF-AQ/GHG-4, 50% of the electrical needs for pool heating was assumed to be provided by solar water heating. The following was assumed for full buildout of the Project in 2037:
    - ***Total annual electricity use:*** *121,850,438 kWh*
    - ***Total annual natural gas:*** *1,499,695 kBtu*
    - ***Total annual PV generation:*** *48,122,901 kWh*

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the Project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the Project's land uses requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment.

The EMWD and Wallace Project-specific water use estimates were reviewed for use in the GHG emission calculations and were determined to be very similar in the estimated total Project-generated water demand. However, the Wallace water use report was applied herein because it provided the necessary breakdown of indoor and outdoor water use as well as the reductions associated with PDFs. For each interim operational scenario, the water use rates were applied to the land uses in operation to estimate water use for that scenario. Swimming pool water usage is included in the residential water use estimates.

The GHG emissions benefit associated with providing on-site well water for the lake was calculated outside of CalEEMod in a spreadsheet and was based on the same water electricity intensity factors assumed in CalEEMod for a consistent analysis. CalEEMod assumes that potable water consumes electricity during supply, treatment, and distribution to the user, and then wastewater treatment after use. When water is supplied on site, the electricity consumed during the initial supply from the water source to the water treatment plant is not required and the electricity consumed during distribution from the water treatment plant to the user is substantially reduced. To estimate the GHG emission reduction associated with on-site well water use, the GHG emissions from avoided electricity consumption were estimated based on the amount of on-site well water provided and the electricity consumed in kilowatts per million gallons per year, and the associated GHG emissions were estimated based on the GHG intensity factors for MVU in the Project analysis year. It was conservatively assumed that only the supply electricity was removed, but the distribution electricity remains (i.e., actual GHG emission reductions are anticipated to be greater).

- **Project without PDF:**
  - ***Water Demand.*** Indoor and outdoor water use was based on Project-specific values. Default CalEEMod values were assumed for electricity intensity for water processes. No septic tanks are proposed;

therefore, the wastewater treatment assumed aerobic and facultative lagoons. Water use associated with the swimming pools was included in the residential water use estimates. A summary of key assumptions under the Buildout 2037 scenario is provided below:

- ***Total indoor use:*** 871,255,000 gallons per year
- ***Total outdoor use:*** 275,957,700 gallons per year
- ***Total recycled water:*** 0 gallons per year
- ***Onsite well water use:*** 0 gallons per year

- **Project with PDF:**
  - ***Water Demand.*** Indoor and outdoor water use was based on Project-specific values. Default CalEEMod values were assumed for electricity intensity for water processes. No septic tanks are proposed; therefore, the wastewater treatment assumed aerobic and facultative lagoons. Water use associated with the swimming pools was included in the residential water use estimates.

    The Project includes various water reduction strategies that would result in indoor and outdoor waste use reductions as outlined in PDF-AQ/GHG-12; however, only residential water usage was assumed to reduce under the with PDF scenario. Specifically, residential water use was assumed to reduce by 23.6% compared to the without PDF scenario, which was reduced in the water use assumptions in CalEEMod. The 23.6% reduction in water use associated with the Project's water conservation measures is the calculated ratio between a per capita demand of 55 gallons per day assumed in the water calculations for the Project (high-end) compared to the anticipated lower per capita estimate of 42 gallons per day. The Project would also include use of recycled water per PDF-AQ/GHG-13, which was assumed in the with PDF scenario based on Project-specific data provided by Wallace and included in the mitigation module in CalEEMod. The Project would also use local well water for the lake fill; however, this option was not available in CalEEMod, so it is quantified in a spreadsheet model. A summary of key assumptions under the Buildout 2037 scenario is provided below:

    - ***Total indoor use:*** 673,582,614 gallons per year
    - ***Total outdoor use:*** 245,870,086 gallons per year
    - ***Total recycled water:*** 68,255,000 gallons per year
    - ***Onsite well water use:*** 65,170,200 gallons per year.

Solid Waste

Land uses associated with the Project generate solid waste that is disposed, and therefore result in CO_2e emissions associated with landfill off-gassing (e.g., anaerobic breakdown of material).

No diversion of solid waste was assumed for the Project; however, this is a conservative assumption as AB 939 had a statewide goal of 50% diversion by 2000, AB 341 had a statewide goal of 75% diversion by 2020, and both the state and the City continue to strive to reduce or divert landfill material.

- **Project without PDF:**
  - ***Solid Waste Generation.*** Default CalEEMod values were applied.
- **Project with PDF:**
  - ***Solid Waste Generation.*** Default CalEEMod values were applied.

Refrigerants

Refrigerants are substances used in equipment for air conditioning (A/C) and refrigeration. Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains), and an operational refrigerant leak rate, and each refrigerant has a GWP that is specific to that refrigerant. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime, and then derives average annual emissions from the lifetime estimate.

- **Project without PDF:**
  - ***Refrigerants.*** Default CalEEMod values applied.
- **Project with PDF:**
  - ***Refrigerants.*** Default CalEEMod values applied.

Tree Planting (Sequestered Carbon Gain)

This GHG analysis estimates the gain of sequestered carbon that would result from planting and growth of trees on site. The calculation methodology and default values provided in i-Tree Planting were used to estimate the one-time carbon-stock change from planting new trees based on the trees provided in the landscaping plan for the Project (i-Tree 2021).

Trees sequester CO_2 while they are actively growing, and the amount of CO_2 sequestered depends on the type of tree. Thereafter, the accumulation of carbon in biomass slows with age, and is assumed to be offset by losses from clipping, pruning, and occasional death. Active growing periods are subject to, among other things, species, climate regime, and planting density; however, for modeling purposes, it was assumed an active growing period of 30 years consistent with the Project lifetime.

Table 4.8-3 presents the total trees planted as assumed at full buildout of the Project in 2037.

Table 4.8-3. Project Planted Tree Assumptions

Tree Type	Amount
Southern magnolia *(Magnolia Grandiflora)*	6,000
California sycamore *(Platenus racemose)*	6,000
American elm *(Ulmas americana)*	6,000
Slash pine *(Pinus elliotti)*	6,000
White ash *(Fraxinus americana)*	6,000
Total	**30,000**

i-Tree assumptions include the following: the City of Moreno Valley as the region, full sun exposure, all trees are in good condition, a 0% mortality rate, and a starting 1-inch diameter at breast height equating to an approximately 15-gallon tree pot. Assumed diameter at breast height is the size of the trunk, specifically the diameter of the truck, measured at 4.5 feet (1.5 meters) above the ground in centimeters or inches. The identified trees are climate-appropriate for the area and region and consistent with City requirements.

Note that PDF-AQ/GHG-11 ensures that planted trees will remain alive and storing carbon by requiring that any tree that dies be replaced with a healthy new tree.

The sequestered carbon from new trees modeling does not include CO_2 emissions estimates associated with planting, care, and maintenance activities (e.g., tree planting and care vehicle travel and maintenance equipment operation). Landscape maintenance equipment emissions were included in the area source emission estimates included in the operational GHG emissions calculations. In addition, operational GHG emissions associated with these maintenance activities are anticipated to be minimal.

Urban trees and their urban canopy cover provide a multitude of benefits, including providing shade that can reduce building heating and cooling needs (conserving energy), providing wildlife habitat and other ecosystem services, filtering stormwater, and sequestering criteria air pollutants; however, these complementary benefits are not considered in the GHG emissions analysis.

4.8.4 Impact Analysis

4.8.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

At the time the 1999 EIR was certified, an evaluation of GHG emissions was not required under CEQA, though the topic was known. As a result, the impacts of project-related construction and operational GHG emissions was not previously considered.

Mitigation

As discussed above, at the time the 1999 EIR was certified, the evaluation of GHG emissions was not required under CEQA, though the topic was known. Given that project-related construction and operational GHG emissions were not previously analyzed, no GHG-specific mitigation was identified or required. However, the extensive mitigation identified for air quality was anticipated to also reduce GHG emissions.

2003 Supplemental EIR

Analysis

At the time the 2003 Supplemental EIR was certified, an evaluation of GHG emissions was not required under CEQA, though the topic was known. As a result, the impacts of project-related construction and operational GHG emissions was not considered in the 2003 Supplemental EIR.

Mitigation

As discussed above, at the time the 2003 Supplemental EIR was certified, the evaluation of GHG emissions was not required under CEQA, though the topic was known. Given that project-related construction and operational GHG emissions were not previously analyzed, no GHG-specific mitigation was identified or required.

2005 Addendum

Analysis

At the time the 2005 Addendum was prepared, an evaluation of GHG emissions was not required under CEQA, though the topic was known. As a result, the impacts of project-related construction and operational GHG emissions was not considered in the 2005 Addendum.

Mitigation

Given that project-related construction and operational GHG emissions were not previously analyzed, no GHG-specific mitigation was identified or required.

4.8.4.2 Project Impact Analysis

Thresholds 1 and 2: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment, or would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed previously, the evaluation herein addresses the significance of the Project's GHG emissions, namely: (1) compliance with the City's CAP, (2) consistency with the 2022 CARB Scoping Plan Updated Appendix D key attributes for residential and mixed-use projects, and (3) consistency with GHG-related goals of the SCAG's RTP/SCS.

Project Potential to Conflict with the City's Climate Action Plan

General Plan Land Use Consistency

The first step in determining CAP consistency for a discretionary development project is to assess a project's consistency with the land use assumptions in the City's General Plan and zoning designations, which were used to calculate the future GHG emissions forecasts and targets for the CAP. If a proposed project is consistent with applicable General Plan and zoning designations, it may be determined to be within the scope of emissions covered under the CAP. If General Plan and zoning designation consistency is demonstrated, a project would still need to demonstrate consistency with all applicable required measures in the CAP Checklist.

If a project is not consistent with the existing General Plan and zoning designations, it is still possible that the land use changes required for the project would remain consistent with the growth projections used in the CAP. The questions below must be completed, as applicable, to determine whether a project is consistent with the City's General Plan and zoning designations and related GHG emissions forecasts and targets.

1. Are the proposed land uses in the Project consistent with the existing 2040 General Plan land use and zoning designations?

> No. While the Project is generally consistent with the City's General Plan, it does involve a greater number of dwelling units and a greater density of residential development than anticipated in the 2040 General Plan. Because the Project answer's "no" to question 1, question 2 is applicable.

2. Is a General Plan amendment and/or rezoning required for the Project?

Yes. To accommodate the greater residential density, the Project proposes a General Plan Amendment to allow for the increased number of dwelling units and residential density. Because the Project answers "yes" to question 1, question 3 is applicable.

3. If the proposed Project is not consistent with the 2040 General Plan land use or zoning designations, does the Project include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?

No. Because the Project proposes a General Plan Amendment to allow for the increased number of dwelling units and residential density when compared to the current General Plan land use, the Project would result in greater GHG emissions than anticipated per current General Plan. The originally approved Project, consistent with the current General Plan assumptions, would result in development of 2,922 dwelling units while the currently approved Project would result in 15,000 dwelling units. Because the Project would result in an increase in the number of dwelling units and residential land use density, no emissions modeling is required to determine if the Project would result in an equivalent or less GHG-intensive project because the Project would result in a greater GHG-intensive project compared to what is allowed under the current land use and zoning.

Per the CAP Checklist, if the answer is "No", the applicant must conduct a full GHG impact analysis for the Project as part of the CEQA process and the Project shall incorporate each of the applicable measures identified in Section C to mitigate cumulative GHG emissions impacts. As such, this SEIR conducts a full GHG analysis of the Project and evaluates the Project's consistency with CAP measures (and see footnote 4, above).

CAP Measure Consistency

Completion of the City's CAP Checklist will document a project's compliance with the GHG reduction measures in the City's CAP that are applicable to new development. The compliance requirements apply to development projects that include discretionary review, require environmental review, and, therefore, are not exempt under CEQA.

All required project-level measures that apply to the proposed project must be answered "Yes" in order to be consistent with the CAP, and documentation must be provided that substantiates how compliance would be achieved. For measures for which a "Yes" is indicated, the features must be demonstrated as part of the project's design and described. All applicable requirements in the checklist will be included in the conditions of approval or issuance of building permit stage of project approval. If any required project-level measures are marked with a "No", the project cannot be determined to be consistent with the CAP, and project-specific GHG analysis and mitigation would be required.

If any questions are marked "N/A" (meaning "not applicable"), a statement describing why the question is not applicable must be provided to the satisfaction of the Planning Division.

Required CAP Measures

Table 4.8-4 presents an evaluation of the Project's consistency with the required measures in the City's CAP checklist.

Table 4.8-4. Project Consistency Evaluation with Moreno Valley Climate Action Plan Required Project-Level GHG Reduction Measures

Checklist Item	Corresponding CAP Measure	Project Consistency Discussion Prior to Mitigation	Project Consistency Discussion with Implementation of Mitigation
If the project includes new residential, commercial, and/or mixed-use development, would the project implement trip reduction programs? (Examples of residential trip reduction programs, or transportation demand management (TDM) strategies include, among others, installing and maintaining on-site bicycle parking; providing designated parking spaces for car share operations; offering an annual carshare membership to building residents or employees; posting wayfinding signage near major entrances directing building users to bus stops, bicycle facilities, car sharing kiosks, and other alternative travel options; and unbundling the price of parking from rents or sale of units.)	TR-5	**Consistent (Yes).** The Project would include a comprehensive TDM program as implemented via PDFs PDF-TRANS-1 through PDF-TRANS-15. The TDM strategies include the following: 1. Community-based travel planning (CBTP). 2. Unbundle residential parking cost from rents (separate pay for parking). 3. Commute trip reduction (CRT) program marketing. 4. Rideshare program. 5. End-of-trip bicycle facilities. 6. Discounted transit program for work trip. 7. Non-electric bikeshare program. 8. Electric scooter share program. 9. Extend transit network coverage to existing and future employment centers such as World Logistics Center (WLC) and extend transit hours for all work shift times such as midnight shift at WLC 24/7. 10. Increase transit service frequency. 11. Implement bus rapid transit (BRT) along Alessandro Boulevard. 12. Develop an on-site state-of-the-art mobility hub to bolster the effectiveness and use of alternative transportation options. 13. Electric bikeshare program. 14. Provide shuttle service to employment centers. 15. Implement market price public parking. Implementation of the Project's comprehensive TDM program would	**Consistent (Yes).** Consistent prior to mitigation.

Table 4.8-4. Project Consistency Evaluation with Moreno Valley Climate Action Plan Required Project-Level GHG Reduction Measures

Checklist Item	Corresponding CAP Measure	Project Consistency Discussion Prior to Mitigation	Project Consistency Discussion with Implementation of Mitigation
		ensure consistency with this CAP measures.	
For projects including new construction or major remodeling of residential development, does the project include installation of real-time energy smart meters?	R-2	**Consistent (Yes).** The Project would include installation of real-time energy smart meters as enforced through PDF-AQ/GHG-7.	**Consistent (Yes).** Consistent prior to mitigation.
During project construction, will clear signage reminding construction workers to limit idling of construction equipment provided?	OR-2	**Potentially Inconsistent (No).** While the Project did not specify posting signage to limit construction equipment idling, it is required and enforced through mitigation.	**Consistent (Yes).** Clear signage would be provided reminding construction workers to limit idling of construction equipment. Implementation of **MM-AQ-4** would ensure that equipment, as well as truck, idling during construction is kept to a minimum.
During project construction, will the project limit construction-related GHG emissions through one or more of the following measures: substituting electrified or hybrid equipment for diesel/gas powered equipment; using alternative-fueled equipment on-site; and avoiding use of on-site diesel/gas powered generators?	OR-2	**Potentially Inconsistent (No).** While the Project did not specify construction equipment GHG emission reduction strategies as a PDF, it is required and enforced through mitigation.	**Consistent (Yes).** Implementation of **MM-AQ-2** would ensure that specific equipment, including generators, welders, and air compressors using during building construction and architectural coating of structures during residential (including combined residential and parking structure), retail, education (school), and hotel phases will be electric. In addition, implementation of **MM-AQ-3** will result in construction-related

Table 4.8-4. Project Consistency Evaluation with Moreno Valley Climate Action Plan Required Project-Level GHG Reduction Measures

Checklist Item	Corresponding CAP Measure	Project Consistency Discussion Prior to Mitigation	Project Consistency Discussion with Implementation of Mitigation
			GHG emission reductions through the use of additional electric, hybrid, or renewable diesel-fueled equipment where commercially available.
For any new landscaping to be included as part of the project, does the project incorporate climate-appropriate, water-wise landscaping features, such as those identified in the County of Riverside Guide To California Friendly Landscaping?	NC-1	**Consistent (Yes).** As part of PDF-AQ/GHG-12, the Project would implement a Water Use Efficiency and Conservation Plan, which includes outdoor conservation features such as use of drought-tolerant landscaping, smart irrigation systems, leak detection, rainwater harvesting, use of permeable pavement, and community education and signage.	**Consistent (Yes).** Consistent prior to mitigation.

As shown in Table 4.8-4, the Project would be consistent with the applicable CAP measures that are required as part of the Project's CAP consistency analysis with the incorporation of mitigation. However, as noted above, the Project is not consistent with step 1 in the checklist regarding consistency with the General Plan, so the applicant must conduct a full GHG impact analysis for the Project as part of the CEQA process and is not deemed consistent with the City's CAP through establishing consistency with these measures.

Voluntary CAP Measures

The CAP also includes voluntary project-level measures that support municipal targets and measures included in the CAP. While not required of project applicants, compliance with these measures support implementation of the CAP and are considered further evidence of consistency. Table 4.8-5 presents an evaluation of the Project's compliance with the City's CAP voluntary measures.

Table 4.8-5. Project Compliance with Moreno Valley Climate Action Plan Voluntary Project-Level GHG Reduction Measures

Checklist Item	Corresponding CAP Measure	Project Compliance Discussion Prior to Mitigation	Project Compliance Discussion with Implementation of Mitigation
The CAP establishes a citywide target of increasing alternatives to single-	TR-3	**Compliant (Yes).** The Project would include a comprehensive TDM	**Compliant (Yes).** Compliant prior to mitigation.

Table 4.8-5. Project Compliance with Moreno Valley Climate Action Plan Voluntary Project-Level GHG Reduction Measures

Checklist Item	Corresponding CAP Measure	Project Compliance Discussion Prior to Mitigation	Project Compliance Discussion with Implementation of Mitigation
occupant vehicle use by 10% for people employed in Moreno Valley by 2040. If the project involves a business with over 50 employees or tenants with such businesses, will the project implement Transportation Demand Management strategies and programs identified in Connect SoCal, the SCAG Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS), including but not limited to: implementing commuter benefit programs, promoting telecommuting and alternative work schedule options, and other financial incentives?		program as implemented via PDFs PDF-TRANS-1 through PDF-TRANS-15. The TDM strategies include the following: 1. Community-based travel planning (CBTP). 2. Unbundle residential parking cost from rents (separate pay for parking). 3. Commute trip reduction (CRT) program marketing. 4. Rideshare program. 5. End-of-trip bicycle facilities. 6. Discounted transit program for work trip. 7. Non-electric bikeshare program. 8. Electric scooter share program. 9. Extend transit network coverage to existing and future employment centers such as World Logistics Center (WLC) and extend transit hours for all work shift times such as midnight shift at WLC 24/7. 10. Increase transit service frequency. 11. Implement bus rapid transit (BRT) along Alessandro Boulevard. 12. Develop an on-site state-of-the-art mobility hub to bolster the effectiveness and use of alternative transportation options. 13. Electric bikeshare program. 14. Provide shuttle service to employment centers. 15. Implement market price public parking. Implementation of the Project's comprehensive TDM program would ensure compliance with this voluntary CAP measure.	

Table 4.8-5. Project Compliance with Moreno Valley Climate Action Plan Voluntary Project-Level GHG Reduction Measures

Checklist Item	Corresponding CAP Measure	Project Compliance Discussion Prior to Mitigation	Project Compliance Discussion with Implementation of Mitigation
If the project includes new multi-family residential and/or mixed-use development, will the project reduce the need for external trips by providing useful services/facilities on-site (Examples include an ATM, vehicle refueling, electric vehicle infrastructure, and shopping)?	TR-9	**Compliant (Yes).** The Project strives to integrate a mix of residential, commercial, retail, entertainment, employment, educational, and recreational uses that will serve each other and thereby reduce vehicular trips and associated environmental impacts. The Project will create an urban core and will provide a wide array of residential including workforce housing oriented adjacent to regional medical centers, the community college and other nearby job centers to further reduce vehicle trips and associated environmental impacts. The Project is a mixed-use Specific Plan that includes complementary land uses and services for the residential land uses including retail (shops and restaurants) and educational facilities (elementary and middle schools). The Project also includes electric vehicle infrastructure.	**Compliant (Yes).** Compliant prior to mitigation.
If the project includes new industrial facilities or involves the expansion of existing industrial facilities, will the project include energy efficient building operations systems to support the citywide goal of a 40% energy reduction in 30% of industrial square footage by 2040?	I-1	**N/A.** The Project does not include new or an expansion of industrial facilities.	**N/A.**
If the project includes industrial or warehousing facilities, will the project install solar energy infrastructure to support the City's goal of providing 25% of energy needs with solar in 30% of industrial and warehouse square footage by 2040?	I-2	**N/A.** The Project does not include new or an expansion of industrial facilities.	**N/A.**

Table 4.8-5. Project Compliance with Moreno Valley Climate Action Plan Voluntary Project-Level GHG Reduction Measures

Checklist Item	Corresponding CAP Measure	Project Compliance Discussion Prior to Mitigation	Project Compliance Discussion with Implementation of Mitigation
Will the project use water efficient lawn and garden maintenance equipment, or reduce the need for landscaping maintenance through drought-resistant planting?	NC-2	**Compliant (Yes).** The Project would reduce the need for landscaping maintenance through the use of drought-tolerant planting and other smart landscape design strategies.	**Compliant (Yes).** Compliant prior to mitigation; however, mitigation enhances the Project's support of this measure. **MM-AQ-10** includes use of zero-emissions landscape equipment for applicant maintained and HOA land and **MM-AQ-11** includes infrastructure and incentives to reduce landscape maintenance equipment emissions through provision of outdoor electrical outlets and encouragement of using the existing yard equipment exchange and rebate program offered through the SCAQMD.

As shown in Table 4.8-5, the Project would be compliant with the applicable CAP measures that are voluntary as part of the Project's CAP consistency analysis prior to the incorporation of mitigation.

Climate Action Plan Efficiency Metric Comparison for Informational Purposes

The City's CAP includes GHG emission forecasts and targets on a per capita emission basis. For 2040, the CAP target is 4.0 MT CO_2e per capita. The forecasted per capita emissions in the CAP were below the target at 3.62 MT CO_2e per capita.

As detailed in the following sections, full buildout of the Project in 2037 with incorporation of PDFs is estimated to result in approximately 100,673 MT CO_2e per year, including amortized construction emissions. Full buildout of the Project is anticipated to be 43,050 residents. Therefore, on a per-capita basis (and not including employees in the population), the Project would result in approximately 2.34 MT CO_2e per capita, which is below the City's CAP target of 4.0 MT CO_2e per capita and the City's anticipated achievement of per capita emissions of 3.62 MT CO_2e.

Summary

As explained in detail above, the Project:

1. Proposes a GPA to allow an increase in the number of dwelling units and land use density and thus greater GHG emissions compared to what is allowed under the current General Plan land use.
2. Would be consistent with the applicable CAP measures that are required as part of the Project's CAP consistency analysis with the incorporation of mitigation.
3. Would be compliant with the applicable CAP measures that are voluntary as part of the Project's CAP consistency analysis prior to the incorporation of mitigation.
4. Would result in approximately 2.34 MT CO_2e per capita, which is below the City's CAP target of 4.0 MT CO_2e per capita and anticipated achieved per capita emissions of 3.62 MT CO_2e.

On item (1), per the CAP Checklist, if the Project is not consistent with the 2040 General Plan land use or zoning designations and would result in greater GHG emissions when compared to the existing designations, the applicant must conduct a full GHG impact analysis for the project as part of the CEQA process, including mitigation. However, due to the set aside of the City's CAP as a result of litigation, the Project also identifies and evaluates below other alternative GHG emissions impact thresholds. Accordingly, no significance conclusion regarding the Project's consistency with the CAP is needed or required.

Project Potential to Conflict with State Reduction Targets and CARB's 2022 Scoping Plan

As discussed above, the California State Legislature passed AB 32 to provide initial direction to limit California's GHG emissions to 1990 levels by 2020 and initiate the state's long-range climate objectives. Since the passage of AB 32, the state has adopted GHG emissions reduction targets for future years beyond the initial 2020 horizon year. CARB is required to develop the Scoping Plan, which provides the framework for actions to achieve the state's GHG emission reduction targets. The Scoping Plan is the official framework for the measures and regulations that will be implemented to reduce California's GHG emissions in alignment with the state's adopted GHG reduction targets. Therefore, a project would be found to not conflict with the state's climate goals set forth in statutes and regulations if it would meet the Scoping Plan policies and not impede attainment of the goals therein.

For the Project, the relevant GHG emissions reduction targets include those established by SB 32 and AB 1279, which require GHG emissions be reduced to 40% below 1990 levels by 2030, and 85% below 1990 levels by 2045, respectively. In addition, AB 1279 requires that the state achieve net zero GHG emissions by no later than 2045 and achieve and maintain net negative GHG emissions thereafter. CARB's 2017 Scoping Plan Update was the first to address the state's strategy for achieving the 2030 GHG reduction target set forth in SB 32 (CARB 2017), and the most recent CARB 2022 Scoping Plan Update outlines the state's plan to reduce emissions and achieve carbon neutrality by 2045 in alignment with AB 1279 and assesses progress toward the 2030 SB 32 target (CARB 2022b). As such, given that SB 32 and AB 1279 are the relevant GHG emission targets, the CARB 2017 and 2022 Scoping Plan Updates that outline the strategy to achieve those targets, are the most applicable to the Project.

The 2017 Scoping Plan Update included measures to promote renewable energy and energy efficiency (including the mandates of SB 350), increase stringency of the Low Carbon Fuel Standard (LCFS), measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increase stringency of SB 375 targets. The 2022 Scoping Plan Update builds upon and accelerates programs currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable

options for walking, biking, and public transit; and displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022b).

Many of the measures and programs included in the Scoping Plan would result in the reduction of Project-related GHG emissions with no action required at the project-level, including GHG emission reductions through increased energy efficiency and renewable energy production (SB 350), reduction in carbon intensity of transportation fuels (LCFS), and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy).

As evaluated in detail in the Project's transportation analysis, per the City's VMT significance criteria, the Project would have a less than significant VMT impact under Existing (2023), Horizon Year (2045) with full buildout of WLC and Horizon Year (2045) with partial buildout of WLC. The Project effect on VMT was also determined to be less than significant under all scenarios. Therefore, the Project would not conflict with CEQA Guidelines Section 15064.3(b) related to the VMT threshold. The Project proposes to significantly increase the quantity of transit service lines and improve headways in the area; however, since those lines are not currently in operation and are run by a third party not in control by the Project, that is not fully assumed. Given that the Project would result in a less-than-significant impact related to VMT, the Project would also not conflict with the 2017 Scoping Plan Update's goal of reducing GHG emissions through reductions in VMT statewide.

The 2045 carbon neutrality goal required CARB to expand proposed actions in the 2022 Scoping Plan Update to include those that capture and store carbon in addition to those that reduce only anthropogenic sources of GHG emissions. The Project would support the state's carbon neutrality goals, as implementation includes addition of urban-tree and native plantings throughout the Project site, which represent opportunities for potential carbon removal and sequestration over the Project lifetime. However, the 2022 Scoping Plan Update emphasizes that reliance on carbon sequestration in the state's natural and working lands will not be sufficient to address residual GHG emissions, and achieving carbon neutrality will require research, development, and deployment of additional methods to capture atmospheric GHG emissions (e.g., mechanical direct air capture). Given that the specific path to neutrality will require development of technologies and programs that are not currently known or available, the Project's role in supporting the statewide goal would be speculative and cannot be wholly identified at this time.

Table 4.8-6 evaluates the Project's potential to conflict with the CARB 2022 Scoping Plan Update, specifically the Project attributes to reduce operational GHG emissions identified in Appendix D, Local Actions (CARB 2022b). Per the Scoping Plan, empirical evidence shows that residential and mixed-use development projects that are consistent with these attributes to reduce GHG emissions will accommodate growth in a manner that aligns with the GHG and equity goals of SB 32. Additionally, consistency with the key project attributes of the 2022 Scoping Plan Update will ensure that projects are 1) addressing the largest sources of their operational emissions, 2) are in alignment with the priority areas defined for Local Climate Action, and 3) are in alignment with the state's climate goals.

Table 4.8-6. Project Potential to Conflict with Key Attributes Identified in Table 3 of the 2022 CARB Scoping Plan's Appendix D

Key Project Attributes	Potential to Conflict
Transportation Electrification	
Provide EV charging infrastructure at least in accordance with CALGreen Tier 2 standards[i]	***No conflict.*** The Project would meet the most ambitious voluntary EV charging infrastructure standards (Tier 2) required by the most recent 2022 CALGreen standards, which will be ensured through PDF-AQ/GHG-1.

Table 4.8-6. Project Potential to Conflict with Key Attributes Identified in Table 3 of the 2022 CARB Scoping Plan's Appendix D

Key Project Attributes	Potential to Conflict
VMT Reduction	
Is located on infill sites that are surrounded by existing urban uses and reuses or redevelop previously undeveloped or underutilized land presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer)[d]	*No conflict.* The Project is located on an infill site. The site's surrounding area is urbanized with a variety of residential densities, education, medical, and other uses consistent with these current designations. Specifically, the surrounding area is predominantly developed with residential uses, primarily single-family neighborhood developments, with some multifamily and mobile home uses. Among these residential neighborhoods lie commercial blocks, containing grocery stores, convenience stores, and restaurants; parks and golf club uses; as well as La Jolla Elementary School, Landmark Middle School, Armada Elementary School, and Victoriano Elementary School. The Riverside University Health System medical Center, a public teaching hospital, is located along a portion of the Project site's northern boundary, and the Kaiser Permanente Hospital and medical complex is situated along a portion of the Project site's southern boundary. Moreno Valley College is directly south of the Project site. The two hospitals and college have recently expanded or have plans to expand in the near future. Approximately ½ mile from the site's southern boundary is the Lake Perris State Recreation Area, which comprises 8,800 acres including the 1,800-acre Lake Perris. This recreational area provides a myriad of recreational activities, including camping, picnicking, fishing, swimming, water sports, and boating opportunities. Existing infrastructure and utilities to serve the site are located within adjacent roadways. The Project would require internal construction of roads for local access, customary extension of water services and facilities, and construction of new sewer lines and stormwater and drainage infrastructure, consistent with existing sewer and stormwater/drainage infrastructure in the area. The site is currently served by three existing Riverside Transit Agency (RTA) bus routes (Routes 20, 31, and 41). Route 20 is south of the Project site, Route 31 is north of the Project site, and Route 41 is west of the Project site. There are bus stops along Lasselle Street west of the Project site, along Iris Avenue south of the Project site, at the Riverside University Medical Center north of the Project site and along Alessandro Blvd a half mile north of the Project site. Commuter train service in the City is provided by Metrolink, which provides service throughout the Southern California region. The Moreno Valley/March Field Metrolink Station is located near the corner of Cactus Avenue and Meridian Parkway, approximately five miles west of the Project site. The Project site was previously approved for residential mixed-use development; as such, the site is currently vacant and graded. The Project amends the previous approval to include additional residences at a greater density, for a total of 15,000 units.

Table 4.8-6. Project Potential to Conflict with Key Attributes Identified in Table 3 of the 2022 CARB Scoping Plan's Appendix D

Key Project Attributes	Potential to Conflict
Do not result in the loss or conversion of the state's natural and working lands	***No conflict.*** The Project would not convert natural and working lands. The Project would develop a residential and mixed-use Specific Plan development on graded, vacant land previously approved for residential mixed-use development.
Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre[e]), *or* in proximity to existing transit (within ½ mile),[f] *or* satisfies more detailed and stringent criteria specified in the region's Sustainable Communities Strategy (SCS)	***No conflict.*** The Project would designate on-site land uses as High Density Residential (up to 50 dwelling units per acre) and proposes the development of up to 15,000 dwelling units. This entails a minimum overall transit-supportive density of 22.4 dwelling units per acre (15,000 dwelling units on 668.6 acres). Thus, the Project would exceed the minimum of 20 dwelling units per acre discussed in this Appendix D attribute. There are existing bus and regional transit service options available to the City within proximity to the Project site. RTA provides local and express services to Riverside County, which includes the City of Moreno Valley. The RTA routes that provide service near the Project site are Route 20 south of the Project site, Route 31 north of the Project site, and Route 41 west of the Project site. There are bus stops along Lasselle Street west of the Project site, along Iris Avenue south of the Project site, at the Riverside University Medical Center north of the Project site and along Alessandro Blvd a half mile north of the Project site. Commuter train service in the City is provided by Metrolink, which provides service throughout the Southern California region. The Moreno Valley/March Field Metrolink Station is located near the corner of Cactus Avenue and Meridian Parkway, approximately five miles west of the Project site. As such, bus stops are located within a half-mile of the Project site; and transit service is located within five miles. The Project is also consistent with the goals of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), "Connect SoCal," as detailed in Section 4.17, Transportation, and 4.11, Land Use and Planning. The Project also satisfies the City's VMT significance criteria, which demonstrates consistency with SCAG's SCS, as detailed below. As evaluated in detail in the Project's transportation analysis, per the City's VMT significance criteria for impact determination, the Project would have a less than significant VMT impact under Existing (2023), Horizon Year (2045) with full buildout of WLC and Horizon Year (2045) with partial buildout of WLC. The Project effect on VMT was determined to be less than significant under all scenarios. Therefore, the Project would not conflict with CEQA Guidelines Section 15064.3(b) related to the VMT threshold. As such, the Project would be consistent with this Connect SoCal and this attribute. Also notable is that the Project would improve the adjacent streets with continuous sidewalk along with an extensive walkable internal Project site. The bike network along circulation element roadways in the focus study area already exists. The Project would construct a Class III bike route along Brodiaea Avenue. The internal streets within

Table 4.8-6. Project Potential to Conflict with Key Attributes Identified in Table 3 of the 2022 CARB Scoping Plan's Appendix D

Key Project Attributes	Potential to Conflict
	the Project would facilitate bike routes and connectivity to the existing bike network. The Project also proposes to work with RTA to improve existing routes frequency, service hours and routes that would expand the transit system throughout the Project, surrounding school, medical uses, nearby industrial employment centers, and the broader Moreno Valley. The Project would improve and enhance active transportation and transit access and facilities while diversifying housing in the area, consistent with General Plan Circulation Element policies and Connect SoCal goals.
Reduce parking requirements[j] by: ▪ Eliminating parking requirements or including maximum allowable parking ratios, *or* ▪ Providing residential parking supply at a ratio of <1 parking space per unit, *or* ▪ Unbundling residential parking costs from costs to rent or lease.	***No conflict.*** The Project is consistent with this attribute through implementation of PDF-TRANS-2, which will unbundle, or separate, a residential project's parking costs from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost. This measure results in decreased vehicle ownership and, therefore, a reduction in VMT and GHG emissions.
At least 20% of the units are affordable to lower-income residents[a,b]	***Potential conflict / No conflict with Supporting Evidence.*** This Appendix D attribute calls for at least 20% of the units to be affordable to lower-income residents. This 20% requirement is intended to reduce GHG emissions by providing greater opportunity for lower income families to live closer to job centers, and achieve a jobs/housing balance near transit and reduce commutes. Providing housing units affordable to lower-income residents is intended to reduce VMT through living more compactly in location-efficient areas. The Project proposes 15,000 multifamily residential homes, none of which would be permanently designated as affordable to low-income households. However, the Project's multifamily residential units are intended to be workforce housing and within the financial means of most people in the Project area. According to the 2040 General Plan Housing Element, based on 2020 home prices, both low- and moderate-income households would generally be able to afford a home in the City "with a sufficient number of bedrooms to avoid overcrowding," and that very-low-income households "may be able to purchase a home, but it would most likely be a smaller, older unit or a condominium or mobile home." The Housing Element explains that, rather than a strong need for affordable housing, the City has "a need for denser housing at all levels of affordability. This demonstrated market support is mirrored in the ownership market, where a sharp increase in median sales prices for smaller homes and condominiums indicates strong demand for more compact and affordable housing types," (See Housing Element, pp. 32-33 and Table 3-12.) The Project design addresses this expressed City housing need.

Table 4.8-6. Project Potential to Conflict with Key Attributes Identified in Table 3 of the 2022 CARB Scoping Plan's Appendix D

Key Project Attributes	Potential to Conflict
	The Project's development of increased residential uses within a mixed-use land use context and nearby jobs help to increase the supply of homes and promote affordability. The mixed-used development proximate to job centers also helps the City balance its jobs-to-housing mix, reduce commutes, lower GHG emissions, and reduce VMT. Per CAPCOA, Measure T-4, permanently-dedicated below market rate housing for low-income families may achieve up to a 28.6% reduction in GHG emissions when compared to market rate units, depending on the percent of units that are designated affordable and the percent VMT reduction anticipated based on daily vehicle trip rates. (CAPCOA 2021).[c] However, CAPCOA's reduction calculation is based on the daily trip differences between low-rise multifamily residential (6.74 daily trips) and affordable housing (4.81 daily trips) in the ITE Trip Generation Manual, 11th Edition. CAPCOA notes the reduction calculation / measure may not apply to mid-rise or higher multifamily residential projects, which are anticipated to comprise approximately 50% of the Project. The Project's design, which includes 50% mid-rise multifamily housing, would effectively achieve an at least equivalent VMT reduction compared to a 20% affordable housing requirement. Mid-rise multifamily housing (50% of the Project) has slightly reduced (4.54 daily trips) trip generation rates compared to affordable housing (4.81 daily trips) (ITE 2021). Thus, a straightforward reduction calculation based on trip rates would show more than double the reduction from 50% mid-rise multifamily housing compared to 20% affordable housing. Further, in Riverside County, low income and higher income earners experience similar commute lengths – 24.6 and 26.1 miles, respectively (Blumenberg and Wander 2023). In addition, other research has shown "affordable housing" VMT reductions result from naturally occurring affordable units, reduced parking requirements, unbundled parking, improvements to bike and pedestrian facilities, and improved transit access – all of which are elements of this Project. The "additionality" of any VMT reduction from "affordable housing" is thereby minimized. Thus, the multifamily project design, including the 50% mid-rise units, would achieve at least equivalent VMT and GHG reductions compared to housing affordable to low-income families, demonstrating consistency with the state's climate goals.[14]

[14] Moreover, in the City of Moreno Valley, requiring 20% permanently dedicated "low-income housing" would discourage needed housing production and potentially increase VMT by preventing multifamily housing in this location-efficient area. The Legislative Analyst Office has previously found that a 20% affordable requirement "may be infeasible" for many home builders. In fact, when inclusionary housing requirements in San Francisco were increased to 15%, the requirements suppressed housing production except in the most expensive parts of town (LAO 2016.) Requiring 20% permanently dedicated low-income housing could substantially limit housing production in the City and, consequently, be counterproductive to reducing VMT and GHG emissions by supporting the production of appropriately located, compact housing. (LAO 2016).

Table 4.8-6. Project Potential to Conflict with Key Attributes Identified in Table 3 of the 2022 CARB Scoping Plan's Appendix D

Key Project Attributes	Potential to Conflict
Result in no net loss of existing affordable units	***No conflict.*** The Project site does not contain any existing residences. Project implementation would develop vacant property and not displace any existing affordable housing units or necessitate construction of any replacement affordable housing units elsewhere.
Building Decarbonization	
Use all electric appliances, without any natural gas connections, and would not use propane or other fossil fuels for space heating, water heating, or indoor cooking[g,h]	*Partial conflict / No conflict with Mitigation.* The Project has incorporated PDF-AQ/GHG-3, which requires that all residential and non-residential development shall use all-electric appliances, except for restaurant land uses within the retail space. As such, the Project's residential land uses, which make up the vast majority of the Project, would be consistent with the building decarbonization attribute. The majority of the non-residential land uses, including schools and non-restaurant retail space, would also be consistent with the electrification attribute. Only the restaurant land uses, which at buildout is anticipated to total 14,970 square feet, would conflict with the electrification attribute. If the natural gas were eliminated from the restaurant spaces and replaced with electricity, a GHG emission reduction of approximately 75 MT CO_2e per year is estimated to result at Project buildout in 2037. The Project would achieve *equivalent* GHG emission reductions through alternative means set forth in **MM-GHG-1** (Implementation of Additional EV Chargers Beyond PDF). As such, with implementation **MM-GHG-1**, the Project would achieve alternative compliance with the building decarbonization / electrification attribute in Appendix D and no conflict would occur.

Source: CARB 2022b. All "Key Project Attributes" are taken from "Table 3 – Key Residential and Mixed-Use Project Attributes that Reduce GHGs" of Appendix D of the 2022 Scoping Plan.
Notes: MMT CO2e = million metric tons of carbon dioxide equivalent.
[A] Newmark and Haas 2015.
[B] California Housing Partnership Corporation 2015 and TransForm 2014.
[C] These measures are not additive such that you could achieve a greater than 50% reduction by incorporating both characteristics in a project design.
[d] California Government Code Section 65041.1.
[e] Federal Transit Administration. 2014.
[F] Washington Department of Transportation. 2013.
[G] Energy and Environmental Economics. 2019.
[H] Energy and Environmental Economics. 2021.
[I] Cal. Code of Regs., tit. 24, Part 11.
[j] CAPCOA 2021.

According to the 2022 CARB Scoping Plan Update, Appendix D, these attributes are a guide to determine residential/mixed-use projects that are *clearly consistent* with the state's climate strategy for CEQA purposes and are not necessarily required. However, lead agencies, such as the City, may determine with adequate supporting evidence that projects that incorporate some, but not all, of the key project attributes are consistent with the state's climate goals.

As shown in Table 4.8-6, the Project incorporates the lion's share of the CARB-recommended attributes that reduce GHG emissions identified in the 2022 CARB Scoping Plan Update, Appendix D, for residential/mixed-use projects.

However, the Project would not clearly satisfy the 20% affordable unit attribute and not fully satisfy the all-electric appliance attribute by exempting restaurant uses.

As noted within Table 4.8-6, above, if the Project provided 20% permanently dedicated affordable units to lower income residents, it would result in anticipated GHG emission reductions compared to an all-low-rise multifamily product type. However, as stated, 50% of the Project is designed as mid-rise residential, such that the Project would be anticipated to achieve at least equivalent VMT reductions compared to a 20% affordable product. If natural gas were eliminated from the restaurant and replaced with electricity, the GHG emissions reduction would be 75 MT CO_2e per year. As such, the GHG emission reduction "gap" needed to demonstrate consistency with the state's climate strategy is 75 MT CO_2e per year. The Project would implement **MM-GHG-1**, which would reduce emissions by 76 MT CO_2e per year, and in doing so, completely close the GHG emissions gap from the Project not fully aligning with the 2022 CARB Scoping Plan Update, Appendix D, Local Actions, recommendations.

As such, the analysis demonstrates that the Project would not conflict with the state's climate goals; and accordingly, the Project would result in a **less-than-significant impact** with implementation of mitigation to achieve equivalent GHG emission reductions.

It is important to note that the 2022 CARB Scoping Plan Update emphasizes the need for housing to address the state's severe housing shortage and notes that CEQA GHG impact analyses and mitigation measures can be sources of litigation and delay for projects (CARB 2022b). The 2022 CARB Scoping Plan Update, Appendix D, also states that the "the housing crisis and the climate crisis must be confronted simultaneously, and it is possible to address the housing crisis in a manner that supports the State's climate and regional air quality goals" (CARB 2022b). Because the Project provides 15,000 residential units in an area with existing and forecasted employment and services, and because it incorporates virtually all the key attributes CARB identifies for new residential/mixed-use development, the Project has been determined to meet most, but not all of the state goals by providing housing in a way that does not conflict with the state's ability to meet future climate goals. And as to any shortfall in achieving the key attributes, the Project provides *equivalent* GHG emissions and VMT reductions.

Project Potential to Conflict with SCAG's 2020-2045 RTP/SCS

The SCAG 2020–2045 RTP/SCS is a regional growth management strategy that targets per-capita GHG reduction from passenger vehicles and light trucks in the Southern California region pursuant to SB 375. In addition to demonstrating the region's ability to attain the GHG emission-reduction targets set forth by CARB, the 2020–2045 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2020–2045 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. The following strategies are intended to be supportive of implementing the 2020–2045 RTP/SCS and reducing GHGs: focus growth near destinations and mobility options; promote diverse housing choices; leverage technology innovations; support implementation of sustainability policies; and promote a green region. The strategies that pertain to SCAG's support of local jurisdiction sustainability efforts would not apply to the Project. The Project's compliance with the remaining applicable strategies is presented below.

- **Focus Growth Near Destinations and Mobility Options.** The Project's compliance with this strategy of the 2020–2045 RTP/SCS is demonstrated via the Project's land use characteristics and features that would reduce vehicular trips and VMT. Regarding VMT reduction characteristics, the Project is a mixed-use development that would provide a complementary mix of residences, schools, and employment

opportunities. The Project would provide multifamily residential land uses, primarily workforce housing, and construct new roadways, bike, and pedestrian facilities which would improve mobility and accessibility within the City. It would support full-time jobs and contribute to the economic prosperity of the region and enhance global competitiveness. By adding housing to an area with future job potential (i.e., buildout of WLC), the Project would contribute to balancing the jobs-housing ratio of the City. The Project supports WLC, which incorporates use of designated truck routes to enhance the regional transportation network for goods movement. The 40-acre lake system, 25 acres of active sports park, and 15 acres of park and lake promenade proposed in the Project would support healthy and equitable communities. The lake promenade would encircle the lake, providing multimodal connectivity and several public amenities including hiking, walking, and biking trails, bandstands, amphitheaters, picnic areas, cafes, kiosks, canoe and kayak rentals, and piers. In addition to this public parkland, private recreation facilities and amenities would be provided at the larger multifamily residential developments. The proposed Mobility Hub and promotion of micro mobility modes such as bikeshare and electric scooter along internal street network of the Project would leverage new transportation technologies and solutions to efficient travel for the Project occupants. The Project is consistent with the transportation-related goals and policies of Connect SoCal, and the does not conflict with anything related to the circulation system.

In addition, as evaluated in detail in the Project's transportation analysis, per the City's VMT significance criteria, the Project would have a less than significant VMT impact under Existing (2023) conditions, Horizon Year (2045) conditions with full buildout of WLC and Horizon Year (2045) conditions with partial buildout of WLC. The Project effect on VMT was also determined to be less than significant under all scenarios. Given that the Project would result in a less-than-significant impact related to VMT, the Project would support the transportation-related goals and policies of Connect SoCal.

- **Promote Diverse Housing Choices.** The Project would comply with this strategy of the 2020–2045 RTP/SCS since it would result in the development of new multifamily, primarily workforce, residential units to increase the housing supply with a mix of options. All types of housing construction are needed to tackle the state's housing shortfall and improve housing affordability, and multifamily housing near transit opportunities and job centers within the City, as the Project provides, especially supports the goals of SCAG, as well as those of the City.
- **Leverage Technology Innovations.** One of the technology innovations identified in the 2020–2045 RTP/SCS that would apply to the Project is the promotion and support of low emission technologies for transportation, such as alternative fueled vehicles to reduce per capita GHG emissions. The Project would support this goal through the inclusion of EV charging stations that meet CALGreen Tier 2. The number of EV charging stations at buildout is anticipated to be 3,566 (PDF-AQ/GHG-1). In addition to EV chargers, the Project would provide 9,509 Level 2 ready receptacles and 2,377 Level 1 EV capable outlets to help meet future EV charging needs. The Project would also include rooftop solar per PDF-AQ/GHG-4 and would comply with current energy code requirements for battery storage, which both could help provide the EV chargers with renewable, clean energy in place of grid electricity from MVU.

  The Project would also establish an electric scootershare program (PDF-TRANS-8), which displaces VMT and reduces associated GHG emissions. As mobile sources are the predominant GHG emission source for the Project and associated per capita GHG emissions, the Project's extensive TDM program of 15 individual PDFs serves to reduce the main source of emissions through reducing VMT, which is one of the two main strategies to reduce transportation emissions (i.e., reduce VMT and decarbonize vehicles). Of note, the Project's TDM program and intentional Project design supports multimodal mobility options, including cars (PDF-TRANS-4 Rideshare Program), bus (PDF-TRANS-9 Extend Transit Network Coverage, PDF-TRANS-10

Increase Transit Service Frequency, PDF-TRANS-11 Implement BRT, and PDF-TRANS-12 Mobility Hub), non-electric and electric bicycles (PDF-TRANS-5 End-of-Trip Bicycle Facilities and PDF-TRANS-7 Non-Electric Bikeshare Program), electric scooters (PDF-TRANS-8 Electric Scootershare Program), and walking (PDF-LU-1 Mixed-Use Project Design, PDF-LU-2 Provision of Urban Core, PDF-LU-3 Short Walkable Blocks, PDF-LU-4 Increased Residential Density, PDF-LU-5 Walkable/Bikeable Community, PDF-LU-9 Complete Streets, and PDF-LU-10 Traffic Calming).

- **Promote a Green Region.** Another applicable strategy within the 2020–2045 RTP/SCS, for individual developments such as the Project, involves promoting a green region through efforts such as supporting local policies for renewable energy production and promoting more resource efficient development (e.g., reducing energy consumption) to reduce GHG emissions. Targeted sustainable design strategies of the Project include electrifying all residential buildings and non-residential buildings, with the exception of restaurant spaces (PDF-AQ/GHG-3), and providing rooftop photovoltaic panels (PDF-AQ/GHG-4). And as mentioned above, the Project also would include electric vehicle charging infrastructure including 3,566 EV charging stations (PDF-AQ/GHG-1). The site would contain 80 acres of recreational uses, and 30,000 trees would be planted on site (PDF-AQ/GHG-11). The Project would further support goals of a green region through provision of energy efficient appliances (PDF-AQ/GHG-6), LED lighting (PDF-AQ/GHG-5), energy smart meters (PDF-AQ/GHG-7), cool pavements (PDF-AQ/GHG-8), and a local farmer's market (PDF-AQ/GHG-10). The Project would reduce energy use associated with water consumption through implementation of a water use efficiency and conservation plan for indoor and outdoor water use (PDF-AQ/GHG-12), use of recycled water for irrigation (PDF-AQ/GHG-13), and use of local well water for the lake (PDF-AQ/GHG-14). The Project's mixed-use design providing residential, retail, schools, and recreational facilities combined with the Project's PDFs help support a connected, sustainable community and a healthy environment, in addition to supporting the green region goal of the 2020-2045 RTP/SCS.

SCAG also develops demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) for its RTP/SCS (SCAG 2020) based on general plans for cities and counties. The Project's residential and employment growth projections fall within the SCAG's 2020-2045 RTP/SCS growth projections for Moreno Valley. Refer to Section 4.3.4.2 of this SEIR. However, the Project would focus additional housing and employment to the Project site in the City's Downtown Center, creating a denser land use pattern than assumed in SCAG's projections. Implementation of **MM-AQ-1** would ensure that the appropriate growth and land use projections at the Project site would be incorporated into the next SCAG RTP/SCS.

Based on the analysis above, the Project would be consistent with the SCAG 2020–2045 RTP/SCS, resulting in a **less than significant impact**.

As noted above, SCAG has released its draft 2024-2050 RTP/SCS, "Connect SoCal 2024"; however, the draft has not been adopted or approved at this time. CEQA does not require consideration of draft plans. (*South of Market Community Action Network v. City and County of San Francisco* (2019) 33 Cal.App.5th 321, 353; *Chaparral Greens v. City of Chula Vista* (1996) 50 Cal.App.4th 1134, 1145, fn. 7) For informational purposes, the following strategies are intended to be supportive of implementing the 2024–2050 RTP/SCS and reducing GHGs: increasing access to neighborhood amenities, open space and urban greening, job centers and multimodal mobility options. The above analysis regarding consistency with the adopted Connect SoCal 2020 similarly supports Project consistency with these draft strategies. Should Connect SoCal 2024 be adopted prior to the City's certification of this SEIR, this analysis will be updated in the Final SEIR.

Quantification of GHG Emissions

Construction Emissions

Construction of the Project would result in GHG emissions, which are primarily associated with the use of off-road construction equipment, haul trucks, on-road vendor trucks, and worker vehicles.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in above and in Appendix D. Construction of the Project is anticipated to commence in January 2025 and would last approximately 12 years, ending in December 2036. Table 4.8-7 presents *unmitigated* construction emissions for the Project in 2025 through 2036.

Table 4.8-7. Estimated Annual Construction Greenhouse Gas Emissions - Unmitigated

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Phase 1 2025	6,030.27	0.24	0.27	5.36	6,121.39
Phase 1 2026	8,298.85	0.21	0.58	8.22	8,483.89
Phase 2 2027	5,376.42	0.14	0.23	4.22	5,452.51
Phase 2 2028	6,336.65	0.15	0.32	5.22	6,439.61
Phase 3 2029	5,524.16	0.14	0.23	3.40	5,598.32
Phase 3 2030	7,197.05	0.17	0.43	4.76	7,333.32
Phase 4 2031	5,292.44	0.14	0.22	2.65	5,363.16
Phase 4 2032	6,794.54	0.15	0.42	3.66	6,926.07
Phase 5 2033	4,985.45	0.13	0.13	2.02	5,030.47
Phase 5 2034	5,601.97	0.12	0.19	2.36	5,665.43
Phase 6 2035	4,925.86	0.12	0.13	1.51	4,968.65
Phase 6 2036	5,453.18	0.12	0.16	1.70	5,505.76
				Total	**72,888.58**
				Amortized 30-Year Construction Emissions	*2,429.62*

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerant; CO_2e = carbon dioxide equivalent; <0.01 = reported value less than 0.01. The values shown are the annual emissions reflect CalEEMod "unmitigated" output.
Totals may not add due to rounding.
See Appendix D for complete results.

As shown in Table 4.8-7, the estimated total GHG emissions during construction would be approximately 72,889 MT CO_2e over the construction period without mitigation. Estimated Project-generated construction emissions amortized over 30 years would be approximately 2,430 MT CO_2e per year. As with Project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the Project would last only for the duration of the construction period.

The air quality analysis required construction-related mitigation measures that would reduce GHG emissions to the extent quantifiable. Specifically, **MM-AQ-2** requires that all generators, welders, and air compressors used during building construction and architectural coating of structures during residential (including combined residential and parking structure), retail, education (school), and hotel phases shall be electrically powered instead of diesel.

Table 4.8-8 presents mitigated construction GHG emissions for the Project in 2025 through 2036 assuming implementation of **MM-AQ-2**.

Table 4.8-8. Estimated Annual Construction Greenhouse Gas Emissions - Mitigated

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Phase 1 2025	5,624.82	0.22	0.26	5.36	5,714.55
Phase 1 2026	7,625.11	0.18	0.57	8.22	7,807.84
Phase 2 2027	4,970.97	0.13	0.23	4.22	5,045.67
Phase 2 2028	5,661.60	0.12	0.31	5.22	5,762.25
Phase 3 2029	5,120.26	0.13	0.22	3.40	5,193.03
Phase 3 2030	6,524.82	0.14	0.42	4.76	6,658.78
Phase 4 2031	4,891.37	0.12	0.21	2.65	4,960.72
Phase 4 2032	6,166.48	0.13	0.41	3.66	6,295.86
Phase 5 2033	4,587.21	0.11	0.13	2.02	4,630.86
Phase 5 2034	5,023.25	0.10	0.19	2.36	5,084.73
Phase 6 2035	4,524.78	0.11	0.12	1.51	4,566.20
Phase 6 2036	4,825.70	0.10	0.16	1.70	4,876.12
				Total	**66,596.61**
				Amortized 30-Year Construction Emissions	*2,219.89*

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R = refrigerant; CO_2e = carbon dioxide equivalent; <0.01 = reported value less than 0.01. The values shown are the annual emissions reflect CalEEMod "unmitigated" output.
Totals may not add due to rounding.
See Appendix D for complete results.

As shown in Table 4.8-8, the estimated total GHG emissions during construction would be approximately 66,597 MT CO_2e over the construction period with mitigation. Estimated Project-generated construction emissions amortized over 30 years would be approximately 2,220 MT CO_2e per year.

Operational Emissions

Operation of the Project would generate GHG emissions through vehicle trips by residents, employees, customers, and visitors to and from the Project site; landscape maintenance equipment operation; energy use (generation of electricity consumed by the Project and minor natural gas use); solid waste disposal; water supply, treatment, and distribution and wastewater treatment; and refrigerants. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described above and in Appendix D.

Table 4.8-9 presents estimated annual operational GHG emissions associated with Project operation over the five interim years evaluated assuming *without* PDFs and *with* PDFs. Details of the emission calculations are provided in Appendix D.

Table 4.8-9. Estimated Annual Operational Greenhouse Gas Emissions – Operational Interim Years

Project Phase	CO_2e metric tons per year
Without PDFs	
Phase 1 2027	31,076.95
Phases 1-2 2029	58,058.07
Phases 1-3 2031	83,772.03
Phases 1-4 2033	105,632.35
Phases 1-5 2035	123,270.55
With PDFs	
Phase 1 2027	18,898.58
Phases 1-2 2029	41,228.57
Phases 1-3 2031	63,558.32
Phases 1-4 2033	81,655.67
Phases 1-5 2035	95,833.71

Notes: CO_2e = carbon dioxide equivalent.
See Appendix D for complete results.

As shown in Table 4.8-9, Project-generated operational GHG emissions would increase over time, as the Project's phased development and operation of proposed land uses come into fruition. However, with incorporation of PDFs, the operational GHG emissions associated with the Project would be substantially reduced as compared to the *without* PDF scenario.

The gain of sequestered carbon resulting from planting and growth of approximately 30,000 trees on site is estimated based on the carbon sequestration rate for the tree species, the number of new trees, and the growing period. It is assumed that all 30,000 trees will grow for a minimum of 30 years. Table 4.8-10 presents the estimated one-time carbon-stock change resulting from proposed planting of new trees.

Table 4.8-10. Planted Trees Sequestered Carbon

Tree Species	Growing Period (years)	Quantity of Trees Planted (trees)	Sequestered Carbon (MT CO_2)
Southern magnolia *(Magnolia grandiflora)*	30	6,000	12,319.06
California sycamore *(Platanus racemosa)*	30	6,000	3,238.40
American elm *(Ulmus americana)*	30	6,000	18,368.62
Slash pine *(Pinus elliottii)*	30	6,000	11,908.79
White ash *(Fraxinus americana)*	30	6,000	13,471.32
	Total	**30,000**	**59,306.19**
	Total (per year when amortized over 30 years)		**1,976.87**

Source: i-Tree Planting Calculator version 2.2.0.
Notes: MT CO_2 = metric tons carbon dioxide.
See Appendix D for calculations and sources.

As presented in Table 4.8-10, the gain in sequestered carbon resulting from planting 30,000 trees would be approximately 59,306 MT CO_2 total, or 1,977 MT CO_2 per year when amortized over 30 years.

As noted previously, the Project site is currently graded with no trees or substantial vegetation that would result in meaningful carbon storage. As such, this GHG analysis does not include a calculation of vegetation-related carbon loss.

Table 4.8-11 presents estimated annual operational GHG emissions, without PDFs and with PDFs, from full buildout of the Project (Phases 1 through 6) in 2037.

Table 4.8-11. Estimated Annual Operational Greenhouse Gas Emissions – Full Buildout -2037

Emission Source	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons Per Year				
Without PDFs					
Mobile	97,712.78	3.68	4.40	41.55	99,156.28
Area	3,590.23	0.08	0.01	N/A	3,594.86
Energy	18,350.10	1.55	0.07	N/A	18,410.11
Water	591.56	28.37	0.68	N/A	1,502.22
Waste	1,122.26	112.17	0.00	N/A	3,926.40
Refrigerant	N/A	N/A	N/A	99.33	99.33
Total	**121,366.94**	**145.83**	**5.15**	**140.88**	**126,689.20**
				EV Charging Station Emissions Benefit	*(503.04)*
				Project Operation	*126,186.16*
				Amortized 30-Year Construction Emissions	*2,219.89*
				Project Operation + Amortized Construction Total	**128,406.05**
With PDFs					
Mobile	91,983.40	3.46	4.14	39.11	93,342.25
Area	539.97	0.03	<0.01	N/A	542.04
Energy	3,221.48	0.24	0.03	N/A	3,235.82
Water	489.32	6.23	0.52	N/A	801.00
Waste	1,122.26	112.17	0.00	N/A	3,926.40
Refrigerant	N/A	N/A	N/A	99.33	99.33
Total	**97,356.42**	**122.13**	**4.69**	**138.44**	**101,946.85**
				EV Charging Station Emissions Benefit	*(1,508.68)*
				On-site Well Water Emissions Benefit	*(8.49)*
				Amortized 30-Year Sequestered Carbon from Tree Planting	*(1,976.87)*
				Project Operation	*98,452.81*
				Amortized 30-Year Construction Emissions	*2,219.89*
				Project Operation + Amortized Construction Total	**100,672.70**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R= refrigerant; CO_2e = carbon dioxide equivalent; <0.01 = reported value less than 0.01; N/A = not applicable
Columns may not sum due to rounding
See Appendix D for complete results.

As shown in Table 4.8-11, *without* PDFs, operation of the Project under full buildout conditions in 2037 would result in approximately 126,186 MT CO_2e per year and would be approximately 128,406 MT CO_2e per year with amortized construction. With incorporation of PDFs, operation of the Project is estimated to be 98,453 MT CO_2e per year, which is a reduction of approximately 22%. With the addition of amortized construction emissions of approximately 2,220 MT CO_2e per year, total Project emissions with PDFs would be approximately 100,673 MT CO_2e per year.

No significance conclusion is relevant as the Project-generated GHG emission calculations are presented for informational purposes only.

4.8.5 Significance of Impacts Before Mitigation

This section addresses the three approaches used in this SEIR before mitigation to address Appendix G GHG emissions thresholds that evaluate if the Project would (1) generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and (2) conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

First, evaluating consistency with the City's CAP, the Project would require a General Plan Amendment to allow for an increase the number of dwelling units and in residential density beyond what is currently allowed per the City's current General Plan land use designations, which would result in greater GHG emissions than currently planned for the Project site. As a result, the Project would not be consistent with the City's CAP forecasts. As to project-level CAP measures, the Project would be consistent with most, but not all, of the required measures prior to mitigation. The Project also would be consistent with the applicable CAP measures that are voluntary as part of the Project's CAP consistency analysis prior to the incorporation of mitigation. The Project does not comply with step 1 of the CAP checklist; thus,. through this SEIR section, a full GHG impact analysis for the Project has been completed as part of the CEQA process. At this time, the City's CAP has been ordered set aside as a result of litigation, such that neither the City nor the Project applicant rely solely on consistency with the City's CAP for CEQA GHG emissions analysis purposes. Instead, this SEIR provides an additional full GHG impact evaluation and mitigation herein.

Second, the Project would potentially conflict with one attribute in the 2022 CARB Scoping Plan Update, Appendix D, Local Actions, recommendations for key attributes of residential and mixed-use new development prior to mitigation as a result of excepting restaurants from full electrification, resulting in a potentially significant impact.

Third, the Project would be consistent with the SCAG 2020–2045 RTP/SCS, resulting in a less-than-significant impact without mitigation.

Overall, the Project's GHG emissions under significance thresholds 1 (potential to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment) and 2 (potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs) result in a **potentially significant impact**.

4.8.6 Mitigation Measures

4.8.6.1 Previously Adopted Mitigation Measures

1999 EIR

No GHG-specific mitigation was required.

2003 Supplemental EIR

No GHG-specific mitigation was required.

2005 Addendum

No GHG-specific mitigation was required.

4.8.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

Mitigation is required for the air quality construction emissions analysis, specifically **MM-AQ-2**, which would also result in quantifiable Project-related GHG emissions benefits through the electrification of specified off-road equipment.

The following mitigation measures are required to fill the GHG emissions gap for the CARB Scoping Plan Appendix D consistency analysis.

MM-GHG-1 Installation of Additional Electric Vehicle Chargers Beyond Project Design Feature. The Project shall install an additional 180 Level 2 240v electric vehicle supply equipment (or stations) in Project parking lots or remaining garages beyond the commitment in PDF-AQ/GHG-1. As PDF-AQ/GHG-1 requires 3,566 (or 15%) Level 2 240v electric vehicle supply equipment (or stations) at Project buildout, implementation of MM-GHG-1 would require installation of a total of 3,746 charging stations at Project buildout. To ensure contemporaneous GHG emissions reductions when natural-gas related GHG emissions are emitted by the Project's restaurant land uses, at least 90 EV chargers above CALGreen Tier 2 standards shall be installed and operational at 50% occupancy of the restaurant land uses and at least 180 EV chargers above CALGreen Tier 2 standards shall be installed and operational at 100% occupancy of the restaurant land uses.

MM-GHG-1 *is quantified in the operational analysis, specifically the CARB Scoping Plan consistency and associated "gap" analysis. The same methodology applied to estimate the GHG emissions benefit from installation of EV chargers for the Project under without PDF and with PDF conditions was applied, which follows the equation in the CAPCOA GHG Handbook for Measure T-14, Provide Electric Vehicle Charging Infrastructure. The number of EV chargers at the Project site at buildout was assumed to be 3,746, which results in an estimated GHG emissions reduction of approximately 1,585 MT* CO_2*e per year. The estimated GHG emissions reduction of approximately 1,585 MT* CO_2*e per year is approximately 76 MT* CO_2*e per year beyond the GHG benefit of installing 3,566 EV chargers (estimated to be approximately 1,509 MT* CO_2*e per year) as required through implementation of PDF-AQ/GHG-1, Electric Vehicle Charging Infrastructure, that commits the Project to meeting CALGreen Voluntary Tier 2 standards for encouragement of EV use. As explained previously under methodology, because the CAPCOA Measure T-14 method only estimates GHG benefits from PHEVs' use of EV chargers and does not estimate GHG reduction potential from the EV chargers supplying power to BEVs, or how the supply of additional EV chargers in a local or regional network may incentivize transition to EVs, the CAPCOA method is considered conservative and actual GHG emission reductions may be greater than presented herein.*

4.8.7 Significance of Impacts after Mitigation

This section addresses the three approaches used in this SEIR after mitigation to address the two Appendix G GHG emissions thresholds.

First, this SEIR evaluates the Project's consistency with the City's CAP. The CAP would require a full GHG impact analysis for the Project as part of the CEQA process, which has been done here. However, the City's CAP has been ordered to be set aside. Accordingly, the Project does not rely solely on consistency with the City's CAP for CEQA GHG emissions analysis purposes. This SEIR provides an additional full GHG impact evaluation and mitigation herein. And in any event, with **MM-AQ-2** and **MM-AQ-4**, the Project would be consistent with all required project-level GHG reduction measures identified in the City's CAP checklist.

Second, as shown in Table 4.8-6 above, the Project would not conflict with the majority of key attributes identified in Appendix D, Local Actions, of the 2022 CARB Scoping Plan. For the one attribute where the Project would result in a potential conflict (20% affordable housing), evidence shows there is no conflict in light of Project design to include 50% mid-rise multifamily housing, which would achieve equivalent or better GHG reductions. For the attribute the Project would result in a partial conflict (complete building decarbonization / natural gas elimination), the Project's implementation of **MM-GHG-1** would achieve *equivalent* GHG emission reductions to "fill the gap" in GHG emissions savings that would otherwise be anticipated related to this attribute. As such, with all PDFs and mitigation, the City, as lead agency, has the discretion to determine that the Project, which meets most, but not all, of the key attributes is consistent with the state's climate goals. In making that discretionary determination, the City may find that the Project would result in a less-than-significant GHG impact with implementation of the PDFs and mitigation related to the 2022 CARB Scoping Plan Update (Appendix D). Accordingly, and with the City's findings in place, the Project would be consistent with the 2022 CARB Scoping Plan Update Appendix D criteria for a residential/mixed-use project, resulting in a **less than significant impact with mitigation**.

Third, the Project would be consistent with the SCAG 2020–2045 RTP/SCS, resulting in a **less than significant impact without mitigation**.

Overall, with implementation of all the above PDFs and mitigation measures, the Project's potential GHG emissions impacts under significance thresholds 1 (potential to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment) and 2 (potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs) would be **less than significant with mitigation**.

4.9 Hazards and Hazardous Materials

This section describes the existing hazardous materials conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found the prior projects would result in less than significant impacts related to hazards and hazardous materials (City of Moreno Valley 1999b, 2003, 2005b).

This section is based on data and information contained in the California Hazardous Waste and Substance Site List (Cortese List), Phase I and Phase II Environmental Site Assessments prepared for the site (Appendix G), the Geotechnical Report (Appendix C), the City of Moreno Valley General Plan 2040 (2040 General Plan)[1], March Air Reserve Base/Inland Port Land Use Compatibility Plan, and other public records and documents.

4.9.1 Existing Environmental Conditions

Groundwater

Location and Jurisdiction

The Project is located in the southeastern portion of the City of Moreno Valley (City), in the western portion of Riverside County. As discussed in Section 4.10, Hydrology and Water Quality, the Project site falls within the Perris North Region of the West San Jacinto Groundwater Basin, which is an unadjudicated portion of the West San Jacinto Groundwater Basin. The Project site also falls within the Eastern Municipal Water District (EMWD), the Santa Ana River Basin, and the Santa Ana Hydrologic Basin Planning Area.

Groundwater Depths

In 2001, groundwater depth was measured in the Filaree well, which at the time of sampling was inactive (see 2001 Phase II Environmental Site Assessment in "Previous Environmental Assessments"). Depth to groundwater in 2001 was 192.4 feet below ground surface (bgs). In 2007, two deep water test wells were completed under Riverside County Environmental Health Well Permit No. 33248, Aquabella Well No. 1 and Aquabella Well No. 2, to implement and maintain the 2005 Aquabella SPA's lake features. The location of these wells is shown on Figure 4.9-1. In Aquabella Well No. 1, three aquifer zones were identified, Zone 1 at 689 to 711 feet bgs, Zone 2 at

[1] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

496 to 518 feet bgs, and Zone 3 from 258 to 280 feet bgs. In Aquabella Well No. 2, Zone 1 was identified at 550 to 571 feet bgs, Zone 2 at 439 to 460 feet bgs, and Zone 3 at 275 to 296 feet bgs. Based on historical measurements, it appears the Filaree well is likely screened within the Zone 3 aquifer. During a more recent well evaluation in 2023, groundwater levels were reported at 72 feet bgs in Aquabella Well No. 1 and 86 feet bgs in Aquabella Well No. 2 (Wallace Group 2023). Refer to Section 4.10 for additional information.

As discussed in Section 4.7, Geology and Soils, geotechnical explorations identified shallow groundwater at a depth between 30 and 50 feet bgs, indicating shallow perched groundwater may be present at the Project site.

Groundwater Quality

Groundwater quality is further discussed in Section 4.10. For the purposes of this chapter, groundwater quality is discussed in regard to the presence of hazardous materials. Based on proposed use of the lake for irrigation and recreational use, including piers and boat use, water quality parameters for the Project are compared to California Department of Public Health Maximum Contaminant Levels (MCLs) and environmental screening levels (ESLs) for freshwater ecotoxicity (SFRWQCB 2019). Ultimately, water quality parameters would be established by an individual permit under the National Pollutant Discharge Elimination System (NPDES) permit program, which would be required for discharge of groundwater to surface waters (SARWQCB 2019).

In 2008, water samples from all three aquifer zones were collected and analyzed for water quality parameters, including metals and volatile organic compounds (VOCs). Analytical results indicated high pH in deeper zones, high total dissolved solids (TDS) in shallow zones, and high vanadium in Aquabella Well No. 2, all of which were above regulatory drinking water standards (California Department of Public Health secondary MCLs and notification level for unregulated chemicals) (RBF Consulting 2008a, 2008b). Water samples were again collected in 2023, which indicated the presence of total coliform bacteria in both wells, nitrate levels relatively close to the MCL, and perchlorate (Wallace Group 2023; Miller, pers. comm., 2024). Table 4.9-1 provides a summary of elevated concentrations observed in these wells compared to applicable screening levels (MCLs and ESLs).

Table 4.9-1. Water Quality Exceedances, Aquabella Well No. 1 and Aquabella Well No. 2

Detected Compounds	Maximum Detected Concentration in Wells		Screening Level	
	No. 1	No. 2	Drinking Water Standard[1]	ESL, freshwater[2]
pH	8.8	9.0	6.5-8.5	N/A
TDS	600	520	500	N/A
Vanadium	39 µg/L	58 µg/L	50 µg/L	19 µg/L
Total Coliform (2023)	129.8 MPN/100mL	23.8 MPN/100mL	Non-detect	N/A
Nitrates (2023)	7.6 mg/L	9.8 mg/L	10 mg/L	N/A
Perchlorate (2023)	7.2 µg/L	4.0 µg/L	6.0 µg/L	600 µg/L

Notes: ESL = environmental screening level; N/A = not applicable; TDS = total dissolved solids; µg/L = microgram per liter; MPN = most probable number; mg/L = milligram per liter.

1 California Department of Public Health secondary Maximum Contaminant Levels (pH and TDS) and notification level for unregulated chemicals (vanadium)

2 Environmental screening level for freshwater toxicity (SFRWQCB 2019).

In April 2020, EMWD circulated an Initial Study (IS)/Mitigated Negative Declaration (MND) for the Perris North Groundwater Monitoring Project, which includes the installation of monitoring wells throughout the Perris North Region to evaluate and treat impacted groundwater throughout the area (EMWD 2020). Contaminants of concern in the Perris North Region include tetrachloroethylene (perchloroethylene or PCE), VOCs, nitrate, perchlorate, total dissolved solids (TDS), fluoride, and manganese (co-mingled with the VOC-nitrate plume). Figure 4.9-2 depicts Figure 2-3 from the EMWD IS/MND, which shows the approximate boundaries of the identified commingled plumes. Figure 4.9-3 depicts Figure 2-4 from the EMWD IS/MND, which shows the proposed well monitoring zones. The Project site overlaps the estimated area of VOC contamination, identified in the EMWD IS/MND as the "North and East Area" (EMWD 2020). EMWD proposes to install a monitoring well, denoted as MW-6, at the intersection of Lasselle Street and John F. Kennedy Drive. This well would be added to the EMWD monitoring program, in addition to existing monitoring wells (including the Scott well located on the Project site, discussed in further subsections).

Additional groundwater investigations were conducted on the Project site, as discussed in the "Previous Environmental Assessments" section below.

Regulatory Records Review for Hazardous Materials

Cortese List Sites

Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to compile a list of hazardous waste and substances sites (Cortese List). This list is used by the state, local agencies, and developers to comply with California Environmental Quality Act (CEQA) requirements in providing information about the location of hazardous materials release sites. The Cortese List must be updated annually. While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

- List of hazardous waste and substance sites from the Department of Toxic Substances Control's (DTSC's) EnviroStor database (California Health and Safety Codes 25220, 25242, 25356, and 116395).
- List of leaking underground storage tank sites from the State Water Resources Control Board GeoTracker database (California Health and Safety Code 25295).
- List of solid waste disposal sites, identified by the State Water Resources Control Board GeoTracker database, with waste constituents higher than hazardous waste levels outside the waste management unit (California Water Code Section 13273[e] and 14 CCR 18051).
- List of cease and desist orders and cleanup and abatement orders identified by the State Water Resources Control Board GeoTracker database (California Water Code Sections 13301 and 13304).
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the California Health and Safety Code, as identified by DTSC.

A search of the Cortese List databases was conducted on March 29, 2023, to identify sites within 1 mile of the Project site, except leaking underground storage tank sites, which were searched within 0.50 miles of the Project site (based on standard due diligence search radii as defined in ASTM E1527-21) (CalEPA 2023). The Project site is not located on a Cortese List site, nor are any Cortese List sites located within 1 mile of the Project site.

Non-Cortese List Sites

Online databases that provide environmental information on releases and cleanup cases in the State of California were also reviewed. While these databases are not included in the Cortese List, they may provide additional information regarding potential environmental contamination at or near the Project site. Table 4.9-2 provides a summary of the databases searched.

Table 4.9-2. Online Database Listings

Database	Details
California Environmental Protection Agency (CalEPA) https://siteportal.calepa.ca.gov/nsite/	The CalEPA Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. Data sources include California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxics Release Inventory (TRI).
Department of Toxic Substance Control (DTSC) EnviroStor https://www.envirostor.dtsc.ca.gov/	The DTSC's data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons for further investigation.
Regional Water Quality Control Board (RWQCB) GeoTracker http://geotracker.waterboards.ca.gov/	The California RWQCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, various unregulated projects, and permitted facilities. Sites include LUSTs, Department of Defense, Cleanup Program, Irrigated Lands, Oil and Gas Production, Permitted underground storage tanks (USTs), and Land Disposal Sites.
National Pipeline Mapping System https://www.npms.phmsa.dot.gov/	The National Pipeline Mapping System Public Map Viewer is a web-based application designed to assist the general public with displaying and querying data related to gas transmission and hazardous liquid pipelines, liquefied natural gas plants, and breakout tanks under Department of Transportation Pipeline and Hazardous Material Safety Administration jurisdiction.
California Geologic Energy Management (CalGEM) Well Finder https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx	The CalGEM Well Finder is a web-based application that plots reported locations and other information for oil and gas wells and other types of related facilities across California.
CalRecycle Solid Waste Information System (SWIS) https://www2.calrecycle.ca.gov/SolidWaste/Site/Search	The SWIS database contains information on solid waste facilities, operations, and disposal sites throughout the state. Solid waste activities include landfills, transfer stations, composting sites, in-vessel digestion sites, engineered municipal solid waste conversion facilities, transformation facilities, and closed disposal sites.

The Project site is identified on the CalEPA Regulated Site Portal. A wetland dredge and fill permit was issued under the Clean Water Act Section 401 to the Project site, under the name "Aquabella (Moreno Valley Field Station, Specific Plan No. 218)." This listing regulates fill and dredge materials, but does not indicate a release of hazardous materials to the Project site. No violations were reported. Additional sites were identified adjoining the Project site. However, these listings are generally administrative in nature, and do not indicate a release of hazardous materials

to the environment, or indicate hazardous materials that are likely to impact the environmental condition of the Project site.

An active natural gas pipeline adjoins the northern boundary of the Project site along Brodiaea Avenue. The east-west running pipeline is 24.31 miles long and is operated by Southern California Gas Company. No active oil and gas wells were identified within 1 mile of the Project site. No solid waste disposal sites were identified within 1 mile of the Project site.

Three sites were identified on the EnviroStor database within 1 mile of the Project site. The three sites were school evaluations and either no impacts were identified, or impacts have been previously remediated for school construction. As such, these sites do not identify environmental contamination at or near the Project site.

Airport Hazards

The March Air Reserve Base (March ARB)/Inland Port Airport is located approximately 2.25 miles west of the westernmost side of the Project site. The Project site falls outside the March ARB Airport Influence Area, which denotes an area where airport-related factors "may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission" (Mead & Hunt 2014). The site is located outside all land use compatibility areas, indicating land uses are not restricted at the site (March ARB 2018). The Project site also does not fall within any noise contours for March ARB, which highlight existing or potential areas of significant aircraft noise exposure, nor does it fall within clear zones or accident potential zones (March ARB 2018).

Like most of the City, the site is located within the Military outer horizontal surface established in accordance with Federal Aviation Administration (FAA) rules under 14 CFR Part 77.9 (Mead & Hunt 2014). These rules establish FAA filing and notice requirements for certain proposed structures near airports depending on their height, location, and proximity to an airport (see the Federal subsection in Section 4.9.2, Regulatory Framework). After receiving notice, the FAA may provide recommendations to ensure the proposed structures do not impact navigable airspace, such as limiting the height of a proposed structure or marking or lighting a particular structure due to its location. The Project would be required to comply with FAA requirements by providing notice, if required, and implementing appropriate FAA recommendations to ensure the proposed structures do not affect navigable airspace. Generally, on-site buildings of 35 feet or less would not require FAA notice based on current requirements.

Wildfire Hazards and Emergency Response

Wildfire Hazards

California Department of Forestry and Fire Protection (CAL FIRE) has developed Fire Hazard Severity Zone Maps for the state of California, which outline potential wildland fire severity for the state. The Project site does not fall within a fire hazard severity zone. The nearest Very High Fire Hazard Severity Zones are located approximately 0.40 miles south/southeast of the Project site across Iris Avenue and 1.15 miles north/northeast of the Project site. CAL FIRE is in the process of updating its Fire Hazard Severity Zone Maps. The Project site remains outside any fire hazard severity zone in CAL FIRE's proposed updated maps (CAL FIRE 2023a, 2023b).

The Project site falls within the Local Responsibility Area, for which fire and emergency response would be provided by the City. The City works with Riverside County Fire for local emergency response (MVFD 2011). The nearest fire station is Riverside County Fire Station 91 (College Park), located at 16110 Lasselle Street, approximately 0.75 miles south-southwest of the Project site. Refer to Section 4.15, Public Services, for more information.

Emergency Response

The Project site falls within the jurisdiction of the Riverside County Department of Environmental Health (DEH), which is the Certified Unified Program Agency for the Project, and as such provides regulatory oversight for management and storage of hazardous materials and hazardous wastes. DEH provides oversight for a variety of programs related to health and safety of citizens of Riverside County and protection of the environment. In addition to hazardous material and hazardous waste management, permitting of underground storage tanks (USTs), and solid waste management, the DEH Hazardous Materials Emergency Response Team provides 24/7 response for chemical related incidents and complaints. The DEH Hazardous Materials Emergency Response Team is a member of the Countywide Hazmat Operations Group and has joint response capabilities with the Riverside County Fire Department and any CAL FIRE contracted city or CAL FIRE hazardous materials response team (County of Riverside 2023).

The 2040 General Plan (City of Moreno Valley 2021) includes a Safety Element (Chapter 6), which outlines, among other things, response procedures for emergency situations, such as natural disasters and hazardous material management. Emergency evacuation routes around the Project site include Cactus Avenue, Iris Avenue, Alessandro Boulevard, and Oliver Street. Evacuation would be southward towards the City of Perris or westward towards March ARB. Evacuation distance to a safe zone would vary depending on the hazard. Evacuees would be considered "safe" once they have exited the hazard area (e.g., are no longer located within an area subject to landslide or flood) or have reached an urbanized area outside the Very High Fire Hazard Severity Zone in the case of a wildfire.

General Plan Policies S.1-23, S.1-24, and S.1-25 relate to the management of hazardous materials within City limits. They require remediation of hazardous materials from previous land uses as part of redevelopment (S.1-23), regulate development on contaminated sites for protection of future occupants and nearby residents (S.1-24), and require proper storage and disposal of hazardous materials to reduce the likelihood of incidents or emergencies (S.1-25).

Schools

The Project site is bordered by two schools, Vista Del Lago High School, located at 15150 Lasselle Street, to the southwest and Landmark Middle School, located at 15261 Legendary Drive, to the east. La Jolla Elementary, located at 14745 Willowgrove Place, is located approximately 0.16 miles east of the Project site (GreenInfo 2021). These three schools are located within the Moreno Valley Unified School District. No pending schools, as reported by the California Department of Education, were identified within the Project site zip code, 97555 (CDE 2023).

Previous Environmental Assessments

1992 Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) was prepared for the original SP 218 in August 1992 (Phase I ESA; Appendix G). The Specific Plan Area evaluated in the Phase I ESA included the Project site, as well as the property which is now Vista del Lago High School to the southwest (southeast corner of John F Kennedy Drive and Lasselle Street), and the property which is now the Villa Annette Apartment complex to the northwest (northeast corner of Cactus Avenue and Lasselle Avenue). At the time the Phase I ESA was prepared, the Project site was owned by the University of California, Riverside, and was used for agricultural farming and research. It had been used for those purposes since 1962. Ranch operational facilities—which included a septic system, chemical storage shed, maintenance shop, equipment storage yard, material storage shed, a poultry house, and a wash down area with underground gasoline and diesel fuel tanks—were located in the northwest corner of the Project site, off

Brodiaea Avenue and Lasselle Avenue. Two residential buildings with septic systems were located west of the ranch facilities. Three on-site water wells were used for irrigation (Filaree, Scott, and Coray). The wells extended greater than 400 feet below ground surface, and the depth to groundwater was identified as approximately 135 to 150 feet below ground surface.

Hazardous materials identified during the Phase I ESA included the following:

- Waste oil from vehicle maintenance, stored in 55-gallon drums and picked up by an oil recycling company.
- Herbicides, pesticides, and fertilizers, stored on site and documented by University of California, Riverside.
- Transite (asbestos-containing) piping in irrigation lines and possible asbestos in on-site buildings
- Potential polychlorinated biphenyls (PCBs) in overhead transformers
- Experimental application of sewage sludge noted in two areas within the Project site.
  - Sewage was reportedly received from Chicago and/or Long Beach. During the Phase I ESA, University of California, Riverside, was actively monitoring the degradation of the sewage sludge.
- Dump site areas where household wastes/refuse were disposed of (one open pit and one buried).
  - The buried dump site was used by the ranch from approximately 1986 to 1988, at which time it was reportedly cleaned out and backfilled.
  - The open dump site was in use in 1991 and reportedly cleaned out in 1992; it was still open during the Phase I ESA.
- Two active USTs: one 1,000-gallon unleaded gasoline single-walled steel UST and one 4,000-gallon diesel single-walled steel UST. Both were registered with DEH.
  - The Phase I ESA noted that the gasoline tank had an aboveground leak, which was repaired in 1991.
  - Documentation of leak testing, which was completed in 1991, was provided in the Phase I ESA.
- Two former USTs, one 500-gallon gasoline UST and one 10,000-gallon weed oil UST, were previously located near the active USTs in the operational area of the ranch. These two tanks were removed from the site in 1989 and 1990. Two samples were collected from the weed oil tank excavation; total petroleum hydrocarbons were detected at 299 milligrams per kilogram. No documentation of the 500-gallon gasoline UST was provided in the Phase I ESA.
- Groundwater analytical data was provided by University of California, Riverside, and included in the Phase I ESA. All three wells were tested for pesticide-related chemicals; the Scott well was further tested for metals, VOCs, and PCBs due to the proximity to the dump sites. Contaminants were not identified in the groundwater wells.

The Phase I ESA made the following recommendations associated with identified potential impacts:

- Appropriately assess, handle, and dispose of asbestos containing materials and septic systems prior to site redevelopment.
- Conduct subsurface exploration of the dump site areas to determine if contamination exists associated with buried wastes.
- Conduct subsurface exploration in the area of the abandoned tank locations (those documented as “removed”) to verify contaminated soils are not present.
- Require existing USTs be removed by a licensed contractor prior to site redevelopment, including verification sampling to ensure impacts to soils did not occur.

- Sample surface soils near the vehicle wash down area, sewage disposal area, within the former pesticide degradation testing areas, and across the Specific Plan Area to verify contaminated soils are not present due to site activities.
- Confirm that transformers do not contain PCBs and verify that leaks have not occurred. If leaks had occurred, soil sampling would be required.
- Sample water wells to verify no contaminants are present in groundwater.
- Require permitting of abandonment of the groundwater wells, asbestos-containing materials, septic systems, and USTs.

1993 Phase II Environmental Site Assessment

A limited Phase II ESA was prepared for the Specific Plan Area in 1993 (1993 Phase II ESA; Appendix G). The property evaluated in the 1993 Phase II ESA was the same footprint as was evaluated in the Phase I ESA. The 1993 Phase II ESA evaluated potential hazardous materials impacts associated with experimental agricultural land use occurring on the property at the time, including some of the items identified in the Phase I ESA. Areas identified with potential hazardous materials impacts included (1) a buried dump site, (2) an open pit dump site, (3) overall property use as a ranch, and (4) experimental sewage sludge disposal areas. The following soil sampling procedures were completed:

- Two 8-inch soil borings were completed in the buried dump site to a depth of 30 feet below ground surface. Soils were observed within the first 17.5 feet; dump site materials were observed within these soils between 8 and 17 feet below ground surface. Dump site materials included mulch, rags, rubber, and mulch-wood clippings. Soil samples were collected at 5-foot intervals and analyzed for organochlorine pesticides, chlorinated herbicides, and semi-volatile organic compounds (SVOCs). 4-4-DDE was detected at 11 micrograms per kilogram, below applicable hazardous waste levels (U.S. Environmental Protection Agency [EPA] Total Threshold Limit Concentration [TTLC]). Other contaminants of concern were not detected.
- Four hand auger borings were completed in the open dump site to approximately 1 foot below ground surface. The area, once used for dumping of household debris, had been cleaned of visible debris. Samples were analyzed for organochlorine pesticides and chlorinated herbicides; 4,4-DDE was detected below hazardous waste levels (EPA TTLC).
- Seventeen soil samples were collected from the top 1 foot of soil in multiple areas around the Specific Plan Area and analyzed for organochlorine pesticides and herbicides, organophosphorus pesticides, VOCs, SVOCs, metals, and other non-hazardous-related parameters. Sample analysis was not consistent; some samples were analyzed for pesticides and herbicides, others were analyzed for metals, based on historical use and anticipated contaminants of concern. Additionally, only one sample was collected from each area identified. Concentrations of organochlorine pesticides (4,4-DDT, 4,4-DDE, and toxaphene), SVOCs (bis-2-ethylhexylphthalate), and metals (arsenic, barium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, thallium, vanadium, and zinc) were detected in on-site soils. Detected concentrations were below hazardous waste levels (EPA TTLC).
- Three surface soil samples were collected from the experimental sludge application areas and analyzed for metals. Metals concentrations were below hazardous waste levels (EPA TTLC).

Water samples were also collected from the Coray and Scott water supply wells and the northern on-site reservoir; samples were analyzed for organochlorine pesticides, chlorinated herbicides, and SVOCs. Compounds associated

with hazardous material releases were not identified, and the water samples were determined to "generally meet Safe Drinking Water Act Standards" applicable at the time (Appendix G).

An asbestos survey was included as part of the 1993 Phase II ESA. Asbestos-containing materials were identified in on-site buildings, and on-site irrigation lines were determined to be made of transite, which contains asbestos.

Southern California Edison was the documented owner of on-site electrical transformers. They were contacted regarding the pole-mounted transformers identified in the Specific Plan Area. The company confirmed there are no PCBs in on-site transformers.

2001 Phase II Environmental Site Assessment

A limited Phase II ESA was completed on Moreno Ranch in 2001 (2001 Phase II ESA; Appendix G). The Moreno Ranch property evaluated in the 2001 Phase II ESA was the same footprint as was evaluated in the 1993 Phase II ESA. The results of the 1993 Phase II ESA were reviewed as part of the 2001 evaluation. In addition, six near-surface soil samples (1.5 to 2 feet below surface) were collected; sample locations were similar to those collected in the 1993 Phase II ESA. Groundwater samples were collected from the two active groundwater supply wells (Coray and Scott) and one inactive groundwater supply well (Filaree). The groundwater depth in the inactive well (Filaree) was measured at 192.4 feet bgs; samples from the other two wells were taken via well pump, and as such depth to water wasn't measured. A methane gas survey was also conducted in the vicinity of the buried dump site area.

Trace concentrations of organochlorine pesticides (4,4-DDD, 4,4-DDE, and 4,4-DDT), trace VOCs (tert-butylbenzene and toluene), and metals were detected in soil samples and VOCs (tetrachloroethylene [PCE], 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and vinyl chloride) were detected in the groundwater samples. Methane (up to 11,242 parts per million [ppm]) was detected in soil gas samples collected from the buried dump site area. Results were compared to regulatory screening levels applicable at the time (EPA Region IX Residential Preliminary Remediation Goals) and hazardous waste levels (EPA TTLC). Results did not exceed applicable regulatory screening levels or hazardous waste levels in soils. Concentrations of 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and vinyl chloride in the groundwater samples exceeded applicable regulatory screening levels (California MCLs for drinking water). The 2001 Phase II ESA concluded the VOCs detected in groundwater were likely due to an off-site source, as there was no indication that historical site use would likely have contributed to VOCs in groundwater. Methane concentrations detected in the buried dump site area were attributed to decomposition of organic matter in the buried debris.

2005 Tank Investigation and Remedial Soil Excavation Report

An investigation was completed in September 2005 for the 2005 Aquabella SPA (Leighton 2005) to evaluate the location of a former UST and remediate an area of diesel staining associated with a former AST. In August 2005, excavations were completed in both the former UST area and diesel-stained areas. The investigations were overseen by a representative of the Riverside County Community Health Agency. In the former UST area, no UST was identified (i.e., it had been previously removed), and stained soils within the excavation area were removed. In the diesel-stained area, stained soils were excavated until clean soils were identified and field screening criteria (photoionization detector readings and visual indicators) did not indicate further contamination. Confirmation samples were collected from the bottom of both excavations and the sidewalls of the diesel-stained area excavation. Confirmation samples revealed low levels of petroleum hydrocarbons remaining in soils; levels were

below present-day screening levels (ESLs and Hazardous Waste Levels shown in Table 4.9-3). Excavated soils were removed and disposed of off site.

While site figures were provided, a full site layout map was not included. As such, the exact excavation areas cannot be determined.

Summary of Previous Environmental Site Assessment Findings

Findings from the 1993 Phase II ESA and 2001 Phase II ESA were compared to present day applicable regulatory screening levels (ESLs) (SFRWQCB 2019). This comparison is shown in Table 4.9-3 below.

Table 4.9-3. Summary of Previous Environmental Site Assessment Findings

Detected Compounds	Maximum Concentration Detected		Environmental Screening Levels			Hazardous Waste Levels	
	1993 Phase II ESA	2001 Phase II ESA					
Soil			Shallow Soil Exposure, Residential	Shallow Soil Exposure, Commercial	Soil Exposure, Construction	TTLC1	STLC (10x STLC)2
Organochlorine Pesticides (micrograms per kilogram)							
4,4-DDD	ND	12	2,700	12,000	81,000	1000	100 (1000)
4,4-DDE	33	120	1,800	8,300	57,000	1000	100 (1000)
4,4-DDT	44	8	1,900	8,500	57,000	1000	100 (1000)
Toxaphene	**576**	ND	510	2,200	14,000	5000	500 (5000)
Semivolatile Organic Compounds (micrograms per kilogram)							
Bis(2-ethylhexyl) phthalate	264	ND	39,000	160,000	950,000	NS	NS
Volatile Organic Compounds (micrograms per kilogram)							
Tert-butyl benzene	ND	12	NS	NS	NS	NS	NS
Toluene	ND	30	1,100,000	5,300,000	4,700,000	NS	NS
Metals (milligrams per kilogram)							
Arsenic	1.0	2.5	12 (background)[3]			500	5.0 (50)
Barium	359	290	15,000	220,000	3,000	10,000	100 (1000)
Cadmium	4.5	ND	78	1,100	51	75	0.75 (7.5)
Chromium	***200***	13	NS	NS	NS	2,500	5 (50)
Cobalt	16.4	15	23	350	28	8,000	80 (800)
Copper	168	17	3,100	47,000	14,000	2,500	25 (250)
Lead	**152**	4.3	80	320	160	1,000	5.0 (50)
Molybdenum	1.4	ND	390	5,800	1,800	3,500	350 (3,500)
Nickel	74.0	6.6	820	11,000	86	2,000	20 (200)
Selenium	0.5	ND	390	5,800	1,700	100	1.0 (10)

Table 4.9-3. Summary of Previous Environmental Site Assessment Findings

Detected Compounds	Maximum Concentration Detected		Environmental Screening Levels			Hazardous Waste Levels	
	1993 Phase II ESA	2001 Phase II ESA					
Silver	5.0	ND	390	5,800	1,800	500	5.0 (50)
Thallium	**9.0**	ND	0.78	12	3.5	700	7.0 (700)
Vanadium	71.0	59	390	5,800	470	2,400	24 (240)
Zinc	543	60	23,000	350,000	110,000	5,000	250 (2,500)
Groundwater			**Maximum Contaminant Level, Drinking Water**	**Vapor Intrusion, Residential**	**Vapor Intrusion, Commercial**	**TTLC1**	**STLC (10x STLC)2**
Volatile Organic Compounds (micrograms per liter)							
Chloroethane	ND	4.0	21,000	23,000	97,000	Not applicable to groundwater	
1,1-dichloroethane	ND	**160**	5.0	7.6	33		
1,1-dichloroethene (DCE)	ND	**6.6**	6.0	66	280		
Cis-1,2-DCE	ND	**7.7**	6.0	49	210		
Trans-1,2-DCE	ND	0.9	10	220	920		
Ethylbenzene	ND	**11**	30	3.5	15		
Tetrachloroethane (PCE)	ND	**1.9**	5.0	0.64	2.8		
Toluene	ND	13	40	1,200	4,900		
1,1,1-trichloroethane (TCA)	ND	3.0	200	1,500	6,300		
1,1,2-TCA	ND	0.6	5.0	5.2	23		
Trichloroethene (TCE)	ND	**14**	5.0	1.2	7.5		
1,2,4-trimethylbenzene	ND	0.7	NS	NS	NS		
Vinyl chloride	ND	**6.5**	0.50	0.0086	0.14		
Total Xylenes	ND	13.3	20	390	1,600		

Table 4.9-3. Summary of Previous Environmental Site Assessment Findings

Detected Compounds	Maximum Concentration Detected		Environmental Screening Levels		Hazardous Waste Levels
	1993 Phase II ESA	2001 Phase II ESA			
Soil Vapor			**Lower Explosive Level**	**Action Level (DTSC 2005)**	
Methane (parts per million)					
Methane	NA	**11,242**	53,000	5,000	

Notes: ND = Not detected above applicable laboratory method reporting limits; NS = No established screening level; NA = Not analyzed.
BOLD = The detected concentration exceeds one or more applicable screening levels.
BOLD ITALIC = The detected concentration exceeds one or more applicable hazardous waste levels.
1 EPA Total Threshold Limit Concentration (TTLC) for characterization of hazardous waste, 22 CCR Section 66261.24.
2 California Soluble Threshold Limit Concentration (STLC) for characterization of hazardous waste, 22 CCR Section 66261.24. If total concentrations are 10x greater than the STLC threshold, STLC analysis should be conducted to verify wastes are not characteristically hazardous.
3 arsenic is compared to the background concentration of 12 mg/kg (DTSC 2020).

Soil

As outlined in Table 4.9-3, some of the previously detected concentrations are above present-day applicable ESLs (SFRWQCB 2019). For soils, these include toxaphene, lead, and thallium, which are all above residential soil exposure screening levels. Chromium was detected above applicable hazardous waste screening levels (10x Soluble Threshold Limit Concentration). The sample locations where these exceedances were identified are shown on Figure 4.9-1. As further discussed in Section 4.9.4.2, Project Impact Analysis, some surface soils have been disturbed during previous grading, and as such, elevated concentrations of contaminants of concern may have been spread or distributed beyond their original location. With regards to arsenic, ambient concentrations of arsenic can be affected by anthropogenic contributions, naturally occurring metals, and/or site-specific releases, which makes it difficult to determine site-specific risk, as ambient concentrations of arsenic are typically found at much higher concentrations than the risk-based soil concentrations. To address this, DTSC has established a regional background concentration of 12 milligrams per kilogram in soil for arsenic, used as a screening tool for Southern California sites. This background concentration encompasses anthropogenic and naturally occurring concentrations in shallow soil (DTSC 2020). The detected concentrations of arsenic are less than the background concentration of 12 milligrams per kilogram.

Groundwater

In groundwater, concentrations of 1,1-dichloroethane, 1,1-DCE, cis-1,2-DCE, ethylbenzene, PCE, TCE, and vinyl chloride detected during the 2001 Phase II ESA were above established ESLs, either for drinking water standards or potential residential vapor intrusion. Drinking water would be provided by the City, and depths to impacted groundwater, as measured in the water supply wells on site, are at least 70 feet bgs, limiting the likelihood of impacts to future occupants via vapor intrusion. Shallower groundwater (30 to 50 feet bgs) observed during geotechnical investigations has not been evaluated.

As discussed in Section 3.3.2, Description of the Specific Plan Amendment, the 40-acre lake system would be developed and maintained using existing on-site water supply wells (Aquabella Well No. 1 and Aquabella Well No. 2) and/or tertiary-treated water. The lake system would be used in the future for stormwater management and irrigation, and water levels would be maintained, as needed, using the groundwater wells. Water samples collected from these wells in 2008 did not reveal elevated concentrations of VOCs or metals (except vanadium) above drinking water quality standards (California Department of Public Health secondary MCLs). pH, TDS, and vanadium were identified above drinking water quality standards; observed vanadium levels were also above the ESL for fresh water ecotoxicity (see Table 4.9-1). The sampling of the two wells (Aquabella Well Nos. 1 and 2) in 2023 indicated that total coliform bacteria are present in each well, nitrate levels were relatively close to—but below—the MCL for drinking water (10 milligrams per liter [mg/L]) at concentrations of 7.6 and 9.8 mg/L, and perchlorate concentrations were found at concentrations of 0.007 and 0.004 mg/L, compared to a maximum contaminant level of 0.006 mg/L (Wallace Group 2023).

Water quality of the planned lake would be required to meet water quality objectives (WQOs) for inland surface waters, as described in the Santa Ana River Basin Plan (SARWQCB 2019) (see Section 4.9.2), and ESLs for freshwater toxicity. Future beneficial uses of the lakes include irrigation and the recreational use of piers and boats.

Methane

For methane, a single, isolated concentration of over 11,000 ppm was identified in the buried waste area, which is shown on Figure 4.9-1. The remaining 23 of 24 collected samples had methane concentrations which were either not detected above 5 ppm or were below 58 ppm. The maximum concentration of 11,242 ppm is below the lower explosive limit for methane, but above the action level established by DTSC. The action level was established for proposed school sites to evaluate the potential risk associated with methane intrusion into buildings (DTSC 2005).

Limiting Conditions

Some of the findings identified in the 1992 Phase I ESA were not evaluated in either the 1993 Phase II ESA or 2001 Phase II ESA. These include the UST areas, both the former and active USTs (as noted in the 1992 Phase I ESA), and the vehicle maintenance area. In addition, while surface soil samples were collected from multiple areas across the site, deeper soil evaluations have not been conducted. Some historical uses, including the USTs, washdown area, dump site, and experimental sludge deposit sites have the potential for deeper soil impacts and soil vapor impacts. Additional investigation of the former farm operational area was conducted during the 2005 tank investigation, but the exact location of the investigation cannot be determined based on information provided in the report (figures do not clearly identify excavation areas). As there were multiple areas of potential contamination, including multiple areas where fuels were stored in both aboveground and underground storage tanks, the 2005 investigation results are not sufficient to confirm remediation of any of the areas in the northwestern corner of the Project site.

No documentation was provided regarding the removal of certain features identified during the 1992 Phase I ESA, including the two USTs active at the time of the 1992 Phase I ESA, the septic systems, the dump sites, the irrigation wells, nor the transite irrigation piping. The Property has been graded, and as such, surface features have been removed, including all buildings. While the 1992 Phase I ESA notes that the buried landfill was reportedly cleaned out before backfilling, debris was observed in borings completed during the 1993 Phase II ESA. As such, buried debris is still present, and it can be assumed debris is also present in the previously observed open dump site, as well. As noted above, the 2005 investigation confirms a former UST had been removed, but the exact location of this area cannot be discerned based on information provided in the report.

4.9.2 Regulatory Framework

Federal

Federal Toxic Substances Control Act and Resource Conservation and Recovery Act

Within the U.S. Code (USC), the Federal Toxic Substances Control Act of 1976 (15 USC 2601 et seq.) and the Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC 6901 et seq.) established a program administered by the EPA for regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments (PL 98-616), which affirmed and extended the “cradle-to-grave” system of regulating hazardous wastes. The use of certain techniques for disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Amendments. Under the authority of RCRA, the regulatory framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste, is found in the Code of Federal Regulations (CFR), Title 40, Parts 260–282.

Hazardous and Solid Waste Amendments

In 1984 the Solid Waste Disposal Act (as amended by RCRA in 1976) was amended to focus on waste minimization and phasing out land disposal of hazardous waste as well as corrective actions for releases.

Pollution Prevention Act

The Pollution Prevention Act was established in 42 USC Section 13101 et seq. (1990) and focuses on reducing the amount of pollution through changes in production, operation, and raw material use. The act focuses on industry, government, and public attention to pollution prevention, specifically through source reduction instead of pollution control. Practices of pollution prevention include increased efficiency in use of water, energy, and other natural resources, and protection of resources through conservation.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 USC 9601 et seq.), commonly known as "Superfund," was enacted by Congress on December 11, 1980. CERCLA provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health and/or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Oil and Hazardous Substances Pollution Contingency Plan, which provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA in 1986, making multiple changes to CERCLA. These changes included emphasizing the importance of permanent remedies in hazardous waste site cleanup, requiring Superfund actions to include requirements found in other federal and state environmental laws and regulations, establishing new enforcement and settlement tools, increasing state involvement in the Superfund program, increasing focus on human health problems posed by hazardous waste sites, encouraging citizen participation, and increasing the trust fund size. SARA also revised the Hazard Ranking System that evaluates eligibility of sites to be included on the National Priorities List.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under USC Title 49. The California Highway Patrol and the California Department of Transportation (Caltrans) have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. These agencies also administer permitting for hazardous materials transportation.

Oil Pollution Prevention Regulations

Oil Pollution Prevention regulations at 40 CFR Part 112 require the preparation of a spill prevention, control, and countermeasure plan if oil is stored in excess of 1,320 gallons in aboveground storage (or if there is buried storage with capacity in excess 42,000 gallons). Spill prevention, control, and countermeasure regulations place restrictions on the management of petroleum materials and therefore have some bearing on hazardous materials management.

National Emission Standard for Asbestos

The regulations at 40 CFR Part 63 established the National Emission Standards for Hazardous Air Pollutants and names asbestos-containing material as one of these materials. Asbestos-containing material use, removal, and disposal are regulated by EPA under this law. In addition, notification of friable asbestos-containing material removal prior to a proposed demolition project is required by this law.

Community Right-to-Know Act

The Community Right to Know Act (40 CFR Parts 350–372) established four types of reporting obligations for facilities storing or managing specified chemicals: emergency planning, emergency release notification, hazardous chemical storage reporting requirements, and toxic chemical release inventory. EPA maintains a database, termed the Toxic Release Inventory, which includes information on reportable releases to the environment.

Regional Screening Levels

The EPA provides regional screening levels (RSLs) for chemical contaminants to provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water (drinking water). RSLs are a recommended, but not mandatory, approach to risk assessment for response actions at CERCLA sites. RSLs are available on the EPA website and provide a screening-level calculation tool to assist risk assessors, remediation project managers, and others involved with risk assessment and decision making. RSLs are also used when a site is initially investigated to determine if potentially significant levels of contamination are present to warrant further investigation. In California, the DTSC Human and Ecological Response Office (HERO) incorporated the EPA RSLs into the HERO human health risk assessment. HERO created Human Health Risk Assessment Note 3, which incorporates HERO recommendations and DTSC-modified screening levels based on the EPA RSLs. The DTSC-modified screening level should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

U.S. Department of Labor, Occupational Safety, and Health Administration

CFR Title 29, Part 1926 – Safety and Health Regulations for Construction

These standards require employee training; personal protective equipment; safety equipment; and written procedures, programs, and plans for ensuring worker safety when working with hazardous materials or in hazardous work environments during construction activities, including renovations and demolition projects and the handling, storage, and use of explosives. These standards also provide rules for the removal and disposal of asbestos, lead, lead-based paint, and other lead materials. Although intended primarily to protect worker health and safety, these requirements also guide general facility safety. These regulations also require the preparation of an engineering survey prior to demolition.

CFR Title 29, Part 1910 – Occupational Safety and Health Standards

Under these regulations, facilities that use, store, manufacture, handle, process, or move hazardous materials are required to conduct employee safety training, inventory safety equipment relevant to potential hazards, have knowledge of safety equipment use, prepare an illness prevention program, provide hazardous substance exposure warnings, prepare an emergency response plan, and prepare a fire prevention plan.

U.S. Department of Transportation

CFR Title 49, Part 172(C) – Shipping Papers

The U.S. Department of Transportation established standards for the transport of hazardous materials and hazardous waste. The standards include requirements for labeling, packaging, and shipping hazardous materials and hazardous wastes, as well as training requirements for personnel completing shipping papers and manifests.

Federal Aviation Administration

14 CFR 77.9, Construction or Alteration Requiring Notice

This regulation establishes requirements for notifying the FAA of certain construction activities and alterations to existing structures, in order to ensure there are no obstructions to navigable airspace. For example, projects that include construction or alteration exceeding 200 feet in height above ground level are required to notify the FAA.

FAA Advisory Circular 150/5200-33C, Hazardous Wildlife Attractants on or near Airports

FAA Advisory Circular 150/5200-33C provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. The advisory circular also discusses airport development projects, including airport construction, expansion, and renovation, affecting aircraft movement near hazardous wildlife attractants. "Hazardous wildlife" is defined as a species of wildlife (birds, mammals, reptiles), including feral and domesticated animals, not under control, that are associated with aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a strike hazard. Included within the advisory circular are minimum separation criteria for land-use practices that attract hazardous wildlife to the vicinity of airports. Separation distances are based on flight patterns, altitude at which most strikes happen, and National Transportation Safety Board recommendations. Land use practices discussed within the advisory circular associated with wildlife hazards directly applicable to the proposed Project include the placement and design of new stormwater management facilities, which must drain within 48 hours after a storm event.

State

California Health and Safety Code

In California, the handling and storage of hazardous materials is regulated by Division 20, Chapter 6.95, of the California Health and Safety Code (Section 25500 et seq.). Under Sections 25500–25543.3, facilities that handle hazardous materials are required to prepare a hazardous materials business plan (HMBP). HMBPs contain basic information about the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of on the site.

Chapter 6.95 of the California Health and Safety Code establishes minimum statewide standards for HMBPs. Under Section 25507, each business must prepare an HMBP if that business uses, handles, or stores a hazardous material (including hazardous waste) or an extremely hazardous material in disclosable quantities equal to or greater than the following:

- 500 pounds of a solid substance
- 55 gallons of a liquid

- 200 cubic feet of compressed gas
- A hazardous compressed gas in any amount (highly toxic with a Threshold Limit Value of 10 parts per million or less)
- Extremely hazardous substances in threshold planning quantities as defined in 40 CFR Part 355

In addition, if a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by California code, facilities are also required to prepare a risk management plan consistent with the California Accidental Release Prevention (CalARP) Program under Title 19 of the California Code of Regulations, Section 2735.1 et seq. The risk management plan provides information about the potential impact zone of a worst-case release, and requires programs designed to minimize the probability of a release and to mitigate potential impacts.

California Office of Emergency Services

To protect the public health and safety and the environment, the California Office of Emergency Services is responsible for establishing and managing statewide standards for business and area plans relating to the handling and release or threatened release of hazardous materials. Basic information on hazardous materials handled, used, stored, or disposed of (including location, type, quantity, and health risks) needs to be available to firefighters and public safety officers. Regulations are included in business plans to prevent or mitigate damage to the health and safety of persons and the environment from the release or threatened release of these materials into the workplace and environment. These regulations are covered under Chapter 6.95 of Division 20 of the California Health and Safety Code Article 1, Business and Area Plans (Sections 25500 to 25519), and Article 2, Hazardous Materials Management (Sections 25531 to 25543.3).

California Occupational Safety and Health Administration

Under the California Occupational Safety and Health Act of 1973, the California Occupational Safety and Health Administration (Cal/OSHA) is responsible for ensuring safe and healthful working conditions for California workers. Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in 8 CCR, Division 1. Cal/OSHA hazardous substances regulations include requirements for safety training, availability of safety equipment, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA also enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances. The hazard communication program also requires that material safety data sheets be available to employees and that employee information and training programs be documented.

In 8 CCR, Division 1, Chapter 4, Subchapter 4, Construction Safety Orders, construction safety orders are listed and include rules for demolition, excavation, explosives work, working around fumes and vapors, pile driving, vehicle and traffic control, crane operation, scaffolding, fall protection, and fire protection and prevention, among others.

Asbestos

The Cal/OSHA Asbestos and Carcinogen Unit enforces asbestos standards in construction, shipyards, and general industry. This includes identification and removal requirements of asbestos in buildings, as well as health and safety requirements of employees performing work under the Asbestos-in-Construction regulations (8 CCR 1529). Only a Cal/OSHA Certified Asbestos Consultant can provide asbestos consulting (as defined by Business and Professions Code Section 7180 et seq. and triggered by the same size and concentration thresholds as for registered

contractors). These services include building inspection, abatement project design, contract administration, supervision of site surveillance technicians, sample collection, preparation of asbestos management plans, and clearance air monitoring.

Lead-Based Paint

The California Department of Public Health enforces lead laws and regulations related to the prevention of lead poisoning in children, prevention of lead poisoning in occupational workers, accreditation and training for construction-related activities, lead exposure screening and reporting, disclosures, and limitations on the amount of lead found in products. Accredited lead specialists are required to find and abate lead hazards in construction projects and to perform lead-related construction work in an effective and safe manner. Lead protections in construction activities are described in 8 CCR, Section 1532.1.

Hearing Conservation and Personal Protective Equipment

A hearing conservation program is required to be administered by employers for employees who are exposed to noise above an 8-hour time-weighted average of 85 A-weighted decibels (8 CCR, Section 5097). Additionally, employers must make hearing protectors available to all employees exposed to the 8-hour time-weighted average of 85 A-weighted decibels or greater at no cost to the employee.

California Hazardous Waste Control Act

DTSC is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than federal requirements. Although the Hazardous Waste Control Act is generally more stringent than RCRA, until EPA approves the California Hazardous Waste Control Program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both the federal and state laws apply in California, and hazardous waste reporting and regulation are enforced through DTSC. The Hazardous Waste Control Act lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

According to 22 CCR 66261.1 et seq., substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated, or that is being stored prior to proper disposal.

Toxic substances may cause short-term or long-lasting health impacts, ranging from temporary impacts to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and

natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric [battery] acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized canisters, and pure sodium metal, which reacts violently with water) may cause explosions or generate gases or fumes.

California Accidental Release Prevention Program

Similar to the Community Right to Know Act, the CalARP Program (19 CCR 2735.1 et seq.) regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. The overall purpose of the CalARP Program is to prevent accidental releases of regulated substances and reduce the severity of releases that may occur. The CalARP Program meets the requirements of the EPA Risk Management Program, which was established pursuant to the Clean Air Act Amendments.

California Unified Program for Management of Hazardous Waste and Materials

Under CalEPA, DTSC and the Enforcement and Emergency Response Program administer the technical implementation of California's Unified Program, which consolidates the administration, permit, inspection, and enforcement activities of several environmental and emergency management programs at the local level. Certified Unified Program Agencies implement hazardous waste and materials standards. This program was established under the amendments to the California Health and Safety Code made by Senate Bill (SB) 1082 in 1994. The programs that make up the Unified Program are as follows:

- Aboveground Petroleum Storage Act Program
- Area Plans for Hazardous Materials Emergencies
- CalARP Program
- HMBPs and Inventories
- Hazardous Material Management Plans and Hazardous Material Inventory Statements
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (Tiered Permitting) Program
- Underground Storage Tank Program

The Certified Unified Program Agency for the Project site is the DEH.

Human Health Risk Assessment Note 3 – DTSC-Modified Screening Levels

Human Health Risk Assessment Note 3 presents recommended screening levels (derived from the EPA RSLs using DTSC-modified exposure and toxicity factors) for constituents in soil, tap water, and ambient air. The DTSC-modified screening level should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

Environmental Screening Levels

ESLs provide conservative screening levels for more than 100 chemicals found at sites with contaminated soil and groundwater. They are intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. ESLs are prepared by the staff of the San Francisco Bay RWQCB. ESLs are not intended to establish policy or regulation, but they can be used as a conservative screening level for sites with contamination. Other agencies in California may elect to use ESLs; in general, ESLs could be used at any site in

California, provided all stakeholders agree. ESLs are not generally used at sites where the contamination is solely related to a leaking underground storage tank; those sites are instead subject to the Low-Threat Underground Storage Tank Closure Policy.

California Department of Transportation/California Highway Patrol

Under 13 CCR, Division 2, Chapter 6, California regulates the transportation of hazardous waste originating or passing through the state. The California Highway Patrol and Caltrans have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. The California Highway Patrol enforces materials and hazardous waste labeling and packing regulations that prevent leakages and spills of material in transit and provides detailed information to cleanup crews in the event of an incident. The California Highway Patrol is responsible for vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation. The California Highway Patrol conducts regular inspections of licensed transporters to ensure regulatory compliance. Caltrans has emergency chemical spill identification teams at locations throughout the state. Hazardous waste must be regularly removed from generating sites by licensed hazardous waste transporters. Transported materials must be accompanied by hazardous waste manifests.

California Code of Regulations

Most state and federal regulations and requirements that apply to generators of hazardous waste are identified in 22 CCR, Division 4.5. Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, treatment, storage, and disposal facilities. As California is a fully authorized state pursuant to RCRA, most RCRA regulations, such as those contained in 40 CFR Part 260 et seq., have been duplicated and integrated into Title 22. However, since DTSC regulates hazardous waste more stringently than EPA, the integration of federal and state hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as RCRA. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than do RCRA regulations in 40 CFR Part 260. To aid the regulated community, California compiled the hazardous materials, waste, and toxics-related regulations contained in CCR Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27, into one consolidated CCR Title 26, Toxics. However, the California hazardous waste regulations are still commonly referred to as “Title 22.”

California Government Code Section 51014.6

Section 51014.6 of the California Government Code states the following:

> (a) Effective January 1, 1987, no person, other than the pipeline operator, shall do any of the following with respect to any pipeline easement: (1) Build, erect, or create a structure or improvement within the pipeline easement or permit the building, erection, or creation thereof. (2) Build, erect, or create a structure, fence, wall, or obstruction adjacent to any pipeline easement which would prevent complete and unimpaired surface access to the easement, or permit the building, erection, or creation thereof. (b) No shrubbery or shielding shall be installed on the pipeline easement which would impair aerial observation of the pipeline easement. This subdivision does not prevent the revegetation of any landscape disturbed within a pipeline easement as a result of constructing the pipeline and does not prevent the holder of the underlying fee interest or the holder’s tenant from planting and harvesting seasonal agricultural crops on a pipeline easement. (c) This section does not prohibit a pipeline operator

> from performing any necessary activities within a pipeline easement, including, but not limited to, the construction, replacement, relocation, repair, or operation of the pipeline.

As stated in the Office of the State Fire Marshal, Pipeline Safety Division Information Sheet (CAL FIRE 2015), it is the position of the State Fire Marshal that nothing may encroach into or upon the pipeline easement that would impede the pipeline operator from complete and unobstructed surface access along the pipeline right-of-way, nor may there be any obstructions that would shield the pipeline right-of-way from observation. In the interest of public safety and the protection of the environment, it is imperative that the pipeline operator visually assesses the conditions along the easement to ensure the integrity of the pipeline.

It is the responsibility of the pipeline operator to ensure that they have unimpeded surface access and to be able to physically observe all portions of their pipeline rights-of-way. In cases where this is not possible, the pipeline operator must inform the State Fire Marshal. The State Fire Marshal will, in collaboration with the pipeline operator, resolve the issue.

California State Aeronautics Act

The purpose of the California State Aeronautics Act, California Public Utilities Code Section 21001 et seq., administered by the Caltrans Division of Aeronautics, is "to protect the public interest in aeronautics and aeronautical progress." Per California Public Utilities Code Sections 21670–21679.5, the State Aeronautics Act directs formation of Airport Land Use Commissions. Airport Land Use Commissions are charged with preparing Airport Land Use Compatibility Plans (ALUCPs), pursuant to California Public Utilities Code Sections 21675 and 21674.7. Consistent with these provisions, the Riverside County Airport Land Use Commission has created an ALUCP for each airport under its jurisdiction. The March ARB/IP Airport land Use Compatibility Plan (March ARB/IP ALUCP) is discussed in greater detail under applicable local regulations.

Environmental Justice

Pursuant to SB 535 and based on a recently updated CalEnviroScreen Version 4.0, CalEPA updated the Designation of Disadvantaged Communities in May 2022. CalEnviroScreen is a screening tool used to identify communities in the state that are disproportionately burdened by multiple sources of pollution. Version 4.0 was released in October 2021. CalEPA formally designates four categories of geographic areas as disadvantaged: (1) census tracts with the highest 25% of overall scores in CalEnviroScreen 4.0; (2) census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5% of CalEnviroScreen 4.0 cumulative pollution burden scores; (3) census tracts identified in 2017 as disadvantaged communities, regardless of their revised scores; and (4) land controlled by federally recognized tribes. CalEnviroScreen 4.0 Percentile Scores are calculated considering both pollution burden and population characteristic scores.

The Project site is not located within a SB 535 Disadvantaged Community but is bordered by Census Tract 6065042517 to the west, which is a SB 535 Disadvantaged Community with a CalEnviroScreen 4.0 Percentile Score of 41. The Project site CalEnviroScreen 4.0 Percentile Score is 38 to 48, indicating a well-below average pollution burden percentile (15th to 22nd percentile) and average to above average population characteristic percentile (59th to 67th percentile).

Local

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) regulates air quality in Riverside County. SCAQMD Rule 1403 governs work practice requirements for asbestos in all renovation and demolition activities, including subsurface piping (transite pipe). Rule 1403 includes requirements for asbestos surveying, notifications, asbestos-containing material removal procedures, schedules, handling and cleanup procedures, storage, disposal, and landfill requirements for waste materials. All operators are also required to maintain records and use appropriate labels, signs, and markings. Rule 1403 incorporates the federal asbestos requirements found in the National Emission Standards for Hazardous Air Pollutants, 40 CFR, Part 61, Subpart M. The EPA has delegated the SCAQMD as the authority to enforce the federal asbestos National Emission Standards for Hazardous Air Pollutants.

SCAQMD Rule 1166 sets requirements to control the emission of volatile organic compounds (VOCs) from excavating, grading, handling, and treating VOC-contaminated soils. Under this rule, soil with a VOC concentration equal to or greater than 50 parts per million is considered "VOC contaminated soil" and must be handled in accordance with Rule 1166. Requirements under this rule include a VOC Contaminated Soil Management Plan, notifications, recordkeeping, monitoring, and handling procedures.

SCAQMD Rule 1466 sets requirements for control of particulate emissions from soils with toxic air contaminants. The provisions in Rule 1466 include ambient coarse particulate matter (PM_{10}) monitoring; dust control measures; and notification, signage, and recordkeeping requirements.

SCAQMD Rule 403 requires dust control measures to be put in place during earthmoving activities or other manmade conditions capable of creating dust. Additional rules apply for large activities which disturb more than 50 acres.

SCAQMD Rule 1150 requires an excavation management plan to be prepared when landfill excavation is going to occur. The plan must identify what quantity of landfilled material will be excavated and transported and must identify mitigation measures to ensure a public nuisance doesn't occur.

Riverside County Department of Environmental Health

The DEH is responsible for oversight of seven hazardous materials programs in Riverside County: Aboveground Petroleum Storage Tanks, Accidental Release Prevention Program, HMBPs, Emergency Response, Underground Storage Tanks, Waste Generator, and Waste Treatment Programs. The DEH is duly authorized to conduct permitting, inspections, and enforcement actions associated with these state programs.

The DEH is also responsible for plan review prior to construction of certain projects. Although DEH only requires plan review for underground storage tank installation at new facilities, some cities and local jurisdictions require permit clearance from DEH, meaning proof that plans are not required, prior to issuing permits and licenses. March JPA permit applications require DEH review for new construction to evaluate potential items that may fall under Riverside County DEH jurisdiction. Additionally, the DEH works with local planning departments during commercial property development to evaluate items such as on-site wastewater treatment, underground storage tanks, the Aboveground Petroleum Storage Act, environmental assessment reviews, and hazardous materials disclosure.

Santa Ana River Basin Plan

The Santa Ana Regional Water Quality Control Board (SARWQCB) has prepared the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan), which establishes WQOs, beneficial uses, and anti-degradation policies for the region (SARWQCB 2019). The Project site is located within the Perris-North Management Zone and the San Jacinto River Basin.

WQOs established for inland surface waters include, among other objectives, toxic substances. As stated in Chapter 4 of the Santa Ana River Basin Plan, "toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health. The concentrations of contaminants in waters which are existing or potential sources of drinking water shall not occur at levels that are harmful to human health. The concentrations of toxic pollutants in the water column, sediments, or biota shall not adversely affect beneficial uses" (SARWQCB 2019).

General Waste Discharge Requirements for De Minimus Discharges

On June 19, 2015, the Santa Ana RWQCB adopted the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality (Order No. R8-2015-0004, NPDES No. CAG998001). This permit regulates the discharge of groundwater and non-stormwater construction dewatering waste to surface waters (including estuarine and ocean waters) that pose an insignificant threat to water quality in the Santa Ana Region. Under this permit, discharges must comply with discharge specifications, receiving water and groundwater limitations, and monitoring and reporting requirements detailed in the permit.

The County of Riverside is a co-permittee under the NPDES Permit for the Riverside County Flood Control and Water Conservation District (i.e., County of Riverside municipal separate storm sewer system permit). The NPDES permit sets limits on pollutants being discharged into waterways and requires all new development and significant redevelopment to incorporate low-impact development features, as laid out in the County's Design Handbook for Low Impact Development Best Management Practices (County of Riverside 2011). Priority projects in the County of Riverside are required to develop and implement a water quality management plan to reduce pollutants, maintain and reduce downstream erosion, as well as maintain stream habitat from all new development. The Santa Ana RWQCB has established the Water Quality Management Plan, A Guidance Document for the Santa Ana Region of Riverside County (SARWQCB 2012), as a template for completing water quality management plans.

Riverside County Area Plan

The DEH, Hazardous Materials Division established the Riverside County Area Plan based on requirements of Chapter 6.95 of the California Health and Safety Code, Title 19 of the CCR and the EPA SARA Title III for emergency response to a release or threatened release of a hazardous material within the county. The Hazardous Materials Program and Response Plan contained in the Riverside County Area Plan serves the majority of the cities in Riverside County, including Moreno Valley.

As part of the Riverside County Area Plan, the federal Risk Management Plan, as incorporated and modified by the CalARP Program, is designed to prevent harm to people and the surrounding environment by the use of various organized systems to identify and manage hazards. The goal of the CalARP Program is to make all facilities that handle regulated substances free of catastrophic incidents.

Any stationary source (business) that exceeds the threshold quantities of regulated substances shall submit a risk management plan under the CalARP Program. A business emergency plan must be submitted by all businesses that handle hazardous materials over a designated threshold quantity. Upon completion of a business emergency plan, the plan is submitted to Moreno Valley's local Certified Unified Program Agency. The Certified Unified Program Agency with responsibility for the City is the DEH. A business emergency plan contains vital information that may be utilized to minimize the effects and extent of a threatened release of hazardous materials. In addition, this information allows emergency response personnel to determine potential risks and hazards while developing a strategy for handling an emergency involving hazardous materials. Annually submitted risk management plans are currently reviewed by the DEH.

If a hazardous materials emergency occurred within the city, the first response would be from the Moreno Valley Fire Department and from the CAL FIRE/Riverside County Fire Department Hazardous Materials Response Team. The Hazardous Materials Response Team is stationed at the Beaumont Fire Station 20 in Beaumont.

March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan

The March ARB/IP ALUCP (Mead & Hunt 2014) was adopted by the Riverside County Airport Land Use Commission on November 13, 2014. The compatibility zones and associated criteria set forth in the March ARB/IP ALUCP provide noise and safety compatibility protection equivalent or greater than the U.S. Air Force recommended criteria presented in the Air Installation Compatible Use Zone (AICUZ) Study.

Air Installation Compatible Use Zone Study

March ARB is a joint-use airport, used for both military and civilian purposes. The airport is owned and regulated by the military. Military installations prepare AICUZ studies to protect vicinity land uses from hazard and noise impacts associated with military airports. The Air Force Reserve completed a new AICUZ study in 2018 for the March ARB as an update of the AICUZ study completed in 2005. The AICUZ delineates the clear zones and accident potential zones for the joint use airfield, as well as the noise contours based upon the project flight operations and use of the aviation field. The noise contours include both military and civilian use, as projected in the FAA conformity determination.

Moreno Valley Local Hazard Mitigation Plan

The City's Local Hazard Mitigation Plan (City of Moreno Valley 2022) is designed to identify the City's hazards, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term natural or human-made hazard risks to human life and property for the city and its residents.

Moreno Valley Emergency Operations Plan

The purpose of the City's Emergency Operations Plan (City of Moreno Valley 2009) is to establish a comprehensive, all-hazards approach to natural, human-made and technological disasters. The plan provides an overview of operational concepts; identifies the components of the City's Emergency Management Organization; and describes overall responsibilities of federal, state, and local agencies. Overall, the plan establishes a system for coordinating the prevention, preparedness, response, recovery and mitigation phases of emergency management in the city.

Moreno Valley Municipal Code

Title 8 of the City of Moreno Valley Municipal Code contains Chapter 8.36 California Fire Code which states that except as expressly excluded, the California Fire Code is adopted by the city. Section 8.36.050 provides fuel modification requirements for new construction. Title 9 of the Municipal Code contains Chapter 9.07 Special Districts which addresses development's compatibility with the City's AICUZ. The AICUZ overlay district applies along the southwestern boundary of the Planning Area, adjacent to March ARB. Development within the AICUZ is subject to specific development standards. Specifically, development within the AICUZ overlay district "shall avoid uses which concentrate large numbers of people; are noise sensitive; create hazards to aircraft operations; pose special health and safety hazards in the event of an aircraft accident; or involve public facilities and utilities for which disruption would have an adverse impact on large numbers of people" (Municipal Code Section 9.07.060[E][1]).

City of Moreno Valley General Plan

The 2040 General Plan (City of Moreno Valley 2021) includes a Safety Element (Chapter 6), which outlines, among other things, response procedures for emergency situations such as natural disasters and hazardous material management.

The following goals and policies relate to hazards and hazardous materials.

S.1-12: Work to prevent wildland fire and to protect lives, property, and watersheds from fire dangers.

S.1-15: Avoid, where feasible, locating new development in areas subject to high wildfire risk. If avoidance is not feasible, condition such new development on implementation fo measures to reduce risks associated with that development.

S.1-19: Cooperate with the Riverside County Fire Department and CALFIRE to ensure that all portions of the Planning Area are served and accessible within an effective response time and to address regional wildfire threats.

S.1-23: Continue to require remediation of hazardous material releases from previous land uses as part of any redevelopment activities.

S.1-24: Regulate development on sites with known contamination of soil or groundwater to ensure that construction workers, future occupants, adjacent residents, and the environment are adequately protected from hazards associated with contamination.

S.1-25: Consistent with State regulations, require proper storage and disposal of hazardous materials to reduce the likelihood of leakage, explosions, or fire, and to properly contain potential spills form leaving the site.

S.2-1 through S.2-9: policies developed in order to provide effective response to disasters and emergencies. These include use and adoption of Local Hazard Mitigation Plan and Emergency Operations Plan (S.2-1), maintain area-wide mutual agreements (S.2-2), ensure critical facilities are located to minimize exposure to environmental hazards and natural disaster areas (S.2-3), maintain and update the emergency operations plan (S.2-4), protect critical evacuation routes (S.2-5), engage police and fire department review in planning and permitting (S.2-6), ensure traffic planning accounts for emergency response capabilities (S.2-7), promote community awareness in emergency preparedness (S.2-8), and promote immunization efforts (S.2-9).

EJ.1-1 through EJ.1-9: policies developed in order to reduce pollution exposure and improve community health. These include air quality planning (EJ.1-1), cooperation with regional agencies to promote public awareness (EJ.1-2), require new development to minimize toxic air contaminants (EJ.1-3), collaborate with SCAQMD to implement the Community Emissions Reduction Plan (EJ.1-4), continue to increase electric vehicles in City fleets (EJ.1-5), minimize short term impacts of construction projects (EJ.1-6), reduce truck idling times with new large commercial projects (EJ.1-7), support new technology and construction that reduce and minimize pollution (EJ.1-8), and designate truck routes around sensitive receptors (EJ.1-9).

4.9.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hazards and hazardous materials would occur if the Project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as result, would create a significant hazard to the public or the environment.
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the Project area.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.9.4 Impact Analysis

4.9.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR determined that the original SP 218 would not increase the risk of an explosion or release of hazardous substances to the environment. A high-pressure gas line exists north of Brodiaea Avenue off site; therefore, improvements to this roadway required coordination with the utility. At the time of the 1999 EIR, a small County hospital located southeast of the site was under construction. The safe use, storage, and disposal of hazardous materials or pathogenic wastes at this hospital is regulated by the Department of Health Services and did not pose a health risk to the surrounding community. These effects were found to not be significant (City of Moreno Valley 1999b).

Mitigation

No mitigation was required.

2003 Supplemental EIR

Analysis

Referencing the 2001 Phase II ESA, the City concluded there was no indication that the Specific Plan Area was contaminated by hazardous materials or waste and that the site was considered suitable for proposed residential and commercial community development. Hazards and hazardous waste impacts were determined to be consistent with the 1999 EIR and less than significant (City of Moreno Valley 2003).

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum described a project comparable in size to the 1999 EIR. Therefore, the impacts related to hazards or hazardous materials were less than or equal to those identified in the 1999 EIR (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was identified.

4.9.4.2 Project Impact Analysis

Threshold 1: Would the Project create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials?

The prior analyses within the 1999 EIR and 2005 Addendum did not address potential impacts related to the transport, use, or disposal of hazardous materials.

Construction

Construction and demolition activities could result in the transport, use, and disposal of hazardous materials such as gasoline, diesel fuel, oil, lubricants, grease, welding gases (e.g., acetylene, oxygen, and argon), solvents, paints, pesticides, and herbicides. These materials would be used and stored in designated construction staging areas within the boundaries of the Project site and would be transported, handled, and disposed of in accordance with all applicable federal, state, and local laws and regulations. The use of these materials for their intended purpose would not pose a significant risk to the public or environment. Hazardous wastes accumulated during Project construction may include unused or off-specification paint and primer, paint thinner, solvents, and vehicle- and equipment-maintenance-related materials, many of which can be recycled. Empty containers for such materials (e.g., drums and totes) may also be returned to vendors, if possible. Hazardous waste that cannot be recycled would be transported by a licensed hazardous waste hauler using a Uniform Hazardous Waste Manifest and disposed of at

an appropriately permitted facility. The use of these substances is subject to applicable federal, state, and local health and safety laws and regulations such as RCRA, CERCLA, SARA, Hazardous Materials Transportation Act, CCR Title 22 and Title 27, Cal/OSHA requirements, the Hazardous Waste Control Act, the CalARP Program, and the California Health and Safety Code, which would minimize health risk to the public associated with hazardous materials.

If hazardous materials and/or petroleum products are stored on the Project site in quantities above applicable regulatory thresholds, applicable regulatory documents and plans will be submitted accordingly. These thresholds include those outlined in the HMBP rules (California Health and Safety Code, Division 20, Chapter 6.95, Article 1; 19 CCR, Division 2, Chapter 4) and Spill Prevention, Control, and Countermeasure Plan rules (40 CFR, Chapter 1, Subchapter D, Part 112). Appropriate plans would be prepared as required by regulation and submitted to the California Environmental Reporting System, as required, and kept on site through construction of the Project. Best management practices and spill prevention and response procedures required by these rules would be implemented.

The construction contractor would be required to implement such regulations relative to the transport, handling, and disposal of any hazardous materials, including the use of standard construction controls and safety procedures to avoid a significant hazard to the public or environment. Standard construction practices would be observed such that any materials released would be appropriately contained and remediated as required by local and state laws.

Operation

The types of uses proposed by the Project include multifamily residential uses; commercial and retail uses; recreational trails, parks, and a lake; schools; and infrastructure and roadway improvements to support the community. As these proposed activities do not include manufacturing or other industrial uses, they are not anticipated to use large quantities of hazardous materials or generate large quantities of hazardous wastes. Operation of the Project would involve the use of potentially hazardous materials typical of residential, commercial, recreational, and civic/school uses including cleaning fluids, detergents, solvents, adhesives, sealers, paints, fuels/lubricants, and fertilizers or pesticides for landscaping. While the proposed land uses would result in an increase in hazardous material use at the site compared to the current baseline condition, these materials would be transported, contained, stored, used, and disposed of in accordance with manufacturers' instructions, applicable standards, and federal, state, and local regulations. Compliance with applicable state and local regulations would serve to protect against a significant and irreversible environmental change that could result from the routine use of these hazardous materials. As with construction, if stored quantities of hazardous material or petroleum products exceed applicable regulatory thresholds, applicable regulatory documents would be prepared and submitted as outlined in HMPB and Spill Prevention, Control, and Countermeasure Plan rules.

Further, school uses in California are required to comply with DTSC requirements for on-site and off-site collection and storage of hazardous wastes. This requires obtaining permits to manage and transport hazardous waste products. Therefore, compliance with state requirements and permitting under the DTSC would ensure that the routine transport, use, and dispose of hazardous materials associated with the potential schools would result in a less than significant impact.

With adherence to federal, state, and local rules and regulations, impacts associated with routine transport, use, or disposal of hazardous materials would be **less than significant**.

Threshold 2: Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Upset and accident conditions were evaluated in previous analyses and impacts were found to be less than significant based on then-current regulations. Since the prior analyses and environmental site assessments, regulatory ESLs have become more stringent (Section 4.9.2). As discussed in Section 4.9.1 above, the information contained in the previous environmental site assessments identifies that on-site concentrations of metals and pesticides in surface soils, VOCs in groundwater, and methane in soil vapor may be above current regulatory screening levels. Construction activities associated with the Project could accordingly result in reasonably foreseeable release or exposure events related to these identified on-site hazardous materials if proper planning does not occur and proper handling and disposal procedures are not followed.

Surface Soils

Previously identified contaminants in surface soil (within the top 1 to 2 feet of soil) were above current residential screening levels for direct exposure to soils, but below commercial exposure and construction exposure screening levels (SFRWQCB 2019). Three isolated areas were identified which contain elevated contaminants of concern, as shown on Figure 4.9-1. These areas are located on the west and east side of the former northernmost reservoir (elevated toxaphene and elevated lead and chromium, respectively), and north of the school on the south side of the Delphinium Avenue right-of-way (elevated thallium).

While the Project site was graded between 2005 and 2008, which disturbed and redistributed surface soils in some areas, grading did not occur in the areas where elevated concentrations of thallium and toxaphene were found (HF 2023a). These areas that historically contained surface soil contaminants with thallium and toxaphene are shown on Figure 4.9-1. As these areas have not been graded or removed, contaminated soils potentially remain present, and as such, if disturbed or constructed upon without appropriate planning, could create a release of hazardous materials to the environment**.** This impact would be **potentially significant**.

With respect to lead and chromium contamination, these contaminants were identified in the 1993 Phase II ESA in an area where experimental sewage sludge land application historically occurred. The sludge application locations are shown on Figure 4.9-1. Although grading has previously occurred in the contaminated area, contamination may remain in deeper soils because, with liquid sludges, contaminants such as lead and chromium may contaminate deeper than surface-level soils. Here, it is unknown if liquids or solids were applied as the characteristics of the sludge were not reported. Thus, it is conservatively assumed that lead and chromium contaminants may remain present in deeper soils. In addition, it is reasonably possible that contamination may be present in other sludge application areas beyond those identified to contain contaminants in the 1993 Phase II ESA, as the sampling that occurred during the 1993 Phase II ESA was limited to one or two samples per area. No additional investigation was conducted in these areas during the 2001 Phase II ESA. Should the soils at the sludge application sites be contaminated and excavated without proper management or disposal, it could create an upset/accident condition involving the release of hazardous materials. This impact would be **potentially significant**.

Areas of the former farm that were used for vehicle maintenance and hazardous materials storage operations at the northwestern corner of the Project site could also contain contaminated soils. The 1992 Phase I ESA notes that two former USTs had been removed; however, documentation of limited soil evaluation was only available for one of the USTs. As such, soil conditions surrounding the other three USTs (500-gallon gasoline [removed prior to 1992], 4,000-gallon diesel, and 1,000-gallon gasoline) and decommissioning is unknown due to the lack of documentation. Further, diesel-stained soil removal occurred in 2005, along with excavation of a former UST area.

However, the exact location of this remediation work was not precisely identified. As noted in Section 4.9.1, there were multiple operational areas with tanks and the potential for petroleum contamination. It is unclear from historical documentation which of these former operational areas have been remediated to date. Because the scope of removal and remediation of the vehicle maintenance and storage area, former tanks, and vehicle washdown area is unknown, all are considered to have the potential for petroleum, solvent, and metal impacts to soils and soil vapor due to the volatile nature of the potential contaminants of concern. These areas are shown on Figure 4.9-1. While surface soils have been graded in these areas, the types of activities and characteristics of hazardous materials used (liquid) are likely to have contaminated soils below the ground surface. Should these soils be disturbed or removed during construction without proper handling or disposal procedures, they could release hazardous materials into the environment. This impact would be **potentially significant.**

Dump Sites and Methane

The presence of dump sites/buried waste on site presents an additional hazardous materials risk if not properly characterized and managed during Project construction. Borings taken within the buried dump site footprint during the 1993 Phase II ESA identified buried wastes mingled with the fill dirt, indicating wastes were not completely removed as previously reported. The 2001 Phase II ESA detected elevated methane concentrations (11,242 ppm) in a single, isolated location where the buried dump site was identified, indicating decomposition of buried wastes. Thus, buried wastes are still present in the dump site area that have not been fully characterized. The approximate boundaries of the dump sites and elevated methane locations are shown on Figure 4.9-1.

The maximum methane concentration detected during the 2001 Phase II ESA was below the lower explosive limit for methane. While methane concentrations were above the action level established by DTSC for proposed school sites to evaluate the risk of methane intrusion into buildings (DTSC 2005), the buried dump site area is not currently proposed for a school (HF 2023b). Thus, the DTSC level does not apply.

The presence of dump sites that have not been fully characterized presents the potential for hazardous materials/wastes to be present on the Project site which, if not properly characterized and managed during construction, could cause an accidental release to the environment. This impact would be **potentially significant.**

Other Potential Accidental Releases of Hazardous Materials

As discussed under Threshold 1, hazardous materials used and/or hazardous wastes generated during construction would be regulated under existing federal, state, and local rules and regulations, which include spill prevention measures, emergency response plans, and reporting of the type, quantity, and storage location of hazardous materials to local response agencies. With adherence to federal, state, and local rules and regulations, impacts associated with foreseeable upset or accident conditions involving release of hazardous materials used or wastes generated during construction would be **less than significant**.

Previous documentation identified transite piping on site, which presents a risk of incidental release of asbestos (see Figure 4.9-1). There is no evidence that the piping has been removed and appropriately disposed of to date. Thus, the piping may still be present beneath surface and graded soils. Portions of transite piping could still be connected to on-site irrigation wells as part of the former system (Coray, Filaree, and Scott wells). In accordance with SCAQMD Rule 1403, a survey of the Project site would be required to identify remaining piping that may contain asbestos prior to grading activities, and piping and materials that contain asbestos would be removed, handled, transported, and disposed of in accordance with appropriate procedures defined in SCAQMD Rule 1403. With implementation of the requirements of SCAQMD Rule 1403, as well as adherence to all

appropriate federal, state, and local rules and regulations regarding asbestos containing materials, including Cal/OSHA Asbestos and Carcinogen Unit; California Department of Public Health; California Department of Resources, Recycling, and Recovery; and EPA National Emission Standards for Hazardous Air Pollutants, impacts related to transite piping and the accidental release of asbestos would be **less than significant**.

Operation

As discussed under Threshold 1 above, Project operation is not anticipated to use significant quantities of hazardous materials or generate significant quantities of hazardous wastes. Commercial uses may involve the use of materials such as diesel fuel for emergency generators, cleaning solvents, or compressed gasses; however, these materials would be regulated under HMBP and Spill Prevention, Control, and Countermeasure Plan rules, as applicable, and quantities would be reported to regulatory agencies, including the DEH. The plans provide for preparation and implementation of emergency response procedures, spill prevention and response procedures, and secondary containment procedures to reduce the likelihood of releases. With adherence to federal, state, and local rules and regulations, impacts associated with foreseeable upset or accident conditions involving release of hazardous materials would be **less than significant.**

Impacts to Groundwater

The Project includes regular maintenance of lake water levels by pumping groundwater from water wells Aquabella Well No. 1 and Aquabella Well No. 2. As discussed in 4.9.1, Existing Environmental Conditions, Groundwater and Previous Environmental Assessments, groundwater beneath the Project site has been shown in previous testing to contain elevated pH and elevated concentrations of TDS, nitrates, total coliform bacteria, vanadium, perchlorate, and/or VOCs. While the 2008 water samples collected directly from Aquabella Well No. 1 and No. 2 did not reveal elevated concentrations of VOCs, which were observed during the 2001 Phase II ESA, a more recent study conducted by EMWD as part of their 2020 Perris North Groundwater Monitoring Project indicates a commingled VOC plume may be present beneath the Project site (EMWD 2020). Well water samples collected in 2023 also contained concentrations of perchlorate above MCLs. As there is conflicting data regarding groundwater quality, and historical groundwater data indicates the potential for elevated concentrations of contaminants of concern above water quality standards—either ESLs for freshwater toxicity or drinking water quality standards—routine use of this groundwater could result in an accidental release to the environment. This impact would be **potentially significant.**

Water quality of the planned lake would be required to meet WQOs for inland surface waters, as described in the Santa Ana River Basin Plan. The discharge of groundwater to surface waters would require an individual permit under the NPDES permit program (SARWQCB 2019) (see Section 4.9.2). The applicant would be required to complete an application for the NPDES program and submit it to SARWQCB for review and approval. In the event groundwater does not meet water quality standards after treatment and/or remediation of groundwater to meet water quality standards isn't feasible, the applicant may choose to utilize the municipal water supply for lake water level maintenance. EMWD prepared a Water Supply Assessment Report for the Project in October 2023 that provided estimated demand projections for the Project, including projections for the proposed lake. The EMWD Water Supply Assessment estimated an average day demand of 180,000 gallons per day, and an annual demand of 202 acre-feet per year. The EMWD Water Supply Assessment concluded that EMWD would have adequate water supply to serve the Project, and the EMWD water demand of the Project and other cumulative development projects in the service area remain within the level of demand accounted for in the EMWD 2020 Urban Water Management Plan.

Groundwater wells not proposed for ongoing use, including the Filaree, Scott, and Coray wells, may also have VOC impacts, and as such could provide a pathway for an accidental release of hazardous materials. This impact would be **potentially significant.** The Scott and Coray wells have been used for groundwater level monitoring as part of development of the EMWD Groundwater Sustainability Plan (GSP); the Scott well (also referred to as "UCR Scott" in EMWD documents) has been identified as a "Representative Monitoring Point" in the GSP, and is currently the only well used by EMWD for groundwater level monitoring within the Moreno Valley Production Area (Dudek 2021). Decommissioning of this well could impact future monitoring activities conducted by EMWD.

Summary

Historical uses of the project site have resulted in contamination to soils and groundwater, including contaminated soils, buried sludges, and dump sites. Construction in these areas could disturb contaminated media resulting in **potentially significant impacts** related to potential upset/accident conditions involving the release of hazardous materials. Groundwater data indicates there's a potential for contaminants of concern above water quality standards, and as such use of groundwater and the presence of groundwater wells presents a potential for releases of hazardous materials during operation, resulting in a **potentially significant impact.**

As discussed under Threshold 1, the Project proposes residential, commercial, retail, parks, and school uses, which do not include manufacturing or other industrial uses that could be anticipated to use large quantities of hazardous materials or generate large quantities of hazardous wastes. Adherence to federal, state, and local rules and regulations, would ensure impacts associated with foreseeable upset and accident conditions during operation would be **less than significant**.

Threshold 3: Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction

Three schools are located within 0.25 miles of the Project site: Vista Del Lago High School to the southwest; Landmark Middle School to the east, and La Jolla Elementary to the east. The Project proposes the development of three elementary schools and one middle school site. As discussed under Thresholds 1 and 2, hazardous materials and wastes used and generated during Project construction would be regulated under existing federal, state, and local rules and regulations, and quantities exceeding applicable thresholds would be reported to DEH, and would include additional protective measures, including spill prevention and response plans. Transite piping would be removed in accordance with SCAQMD Rule 1403. These measures would be protective of nearby existing or proposed schools.

As discussed in Threshold 2, potential soil impacts are present in multiple locations throughout the Project site, including elevated thallium and toxaphene in former chemical storage and use areas, potential contaminants in former sludge application areas, potential contaminants associated with the former farm operations area, elevated methane due to former dump sites, and groundwater impacts. While only one of these impacts is within 0.25 miles of a current school (see Figure 4.9-1), all of these impacts could be within 0.25 miles of one of the schools proposed as part of the Project. Transportation of impacted soils without proper characterization and handling procedures could result in a **potentially significant impact** related to releases of hazardous materials within 0.25 miles of a school. Site soil management requirements are designed to reduce or eliminate off-site impacts, including dust suppression and stockpile control (to reduce tracking of contaminated soils off site). The Project would also be required to comply with SCAQMD's air quality related construction regulations, including 1466 and 1166, which

regulate construction in soils with toxic air contaminants, 403, which requires dust control during earth-moving activities, and 1150, which regulates excavation in dump sites. Management and mitigation of contaminated soils would minimize potential impacts to nearby schools and future schools proposed as part of the Project.

While methane concentrations were above the action level established by DTSC for proposed school sites to evaluate the risk of methane intrusion into buildings (DTSC 2005), the buried dump site area is not currently proposed for a school (HF 2023b). Thus, the DTSC level does not apply, and impacts would be **less than significant.** Further, potential methane gas impacts associated with the former waste burial on the Project site would be mitigated as part of **MM-HAZ-2**, thereby removing potential methane impacts to existing or future schools.

Construction impacts related to hazardous emissions or handling of hazardous materials within one-quarter mile of a school would be **potentially significant.**

Operation

The Project proposes residential, commercial, retail, parks, and school uses, which do not include manufacturing or other industrial uses that could be anticipated to use large quantities of hazardous materials or generate large quantities of hazardous wastes. Adherence to federal, state, and local rules and regulations, would minimize impacts associated with any hazardous materials associated with common residential, commercial, park/recreation, and school uses such as household cleaners, paints, and herbicides/pesticides.

Proposed operations are unlikely to require air permits, as industrial uses are not proposed. However, some commercial uses, such as emergency diesel generators, may require air discharge permits under SCAQMD rules. Adherence to SCAQMD rules and regulations would require evaluation and permitting of potential air discharges, reducing impacts to less than significant levels.

Potable water would be supplied to future schools by EMWD; groundwater would not be used as drinking water. Thus, operational impacts to existing and future schools would be **less than significant**.

Threshold 4: Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as result, would create a significant hazard to the public or the environment?

The Project is not located on nor is impacted by a hazardous material site listed on the Cortese List (pursuant to Government Code 65962.5). As such**, no impact** would occur.

Threshold 5: Would the Project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and as such result in a safety hazard or excessive noise for people residing or working in the Project area?

As discussed in Section 4.9.1, the March ARB is located approximately 2.25 miles west of the westernmost side of the Project site. The Project site falls outside the March ARB Airport Influence Area, which denotes an area where airport-related factors "may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission" (Mead & Hunt 2014). The site is located outside all land use compatibility areas, indicating land uses are not restricted at the site (March ARB 2018). The Project site also does not fall within any noise contours for March ARB, which highlight existing or potential areas of significant aircraft noise exposure

(March ARB 2018). Thus, the Project would not likely result in a safety hazard or excessive noise hazard for people residing or working in the area. **No impact** would occur.

Threshold 6: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As discussed in Section 4.17, Transportation, the 1999 EIR included multiple road improvements to mitigate potential traffic hazards and impacts to evacuation routes. The Project would include several internal roadways and connections to existing City roadways, consistent with the 2040 General Plan Circulation Element. While the design and access details such as internal street network, driveway locations or curb cuts are unknown at this time, all internal roadways would be built to meet all minimum fire apparatus access requirements of the Riverside County Fire Department and California Fire Code. Consistent with City's Engineering Standards, the Project's roadways would be required to meet all access requirements such as roadway widths, all-weather surface requirements, length of streets, turning requirements, grade restrictions, maintenance requirements, and parking restrictions. Specific fire and life safety requirements would be addressed at the building permit phase when architectural plans are submitted for City review and approval. Adequate emergency access and compliance with emergency access and design standards would be ensured through this review by the City and responsible emergency service agencies throughout Project implementation.

As discussed in Section 4.20, Wildfire, numerous potential evacuation routes are available in this urbanized area to connect the Project site with major transportation corridors. New roads constructed within the Project boundary would connect to John F. Kennedy Drive, Cactus Avenue, Lasselle Street, Oliver Street, and Iris Avenue. The Project would provide five main points of ingress and egress, as well as circulation on site that would connect existing roadways, which would provide additional opportunities for evacuation through the Project site for Project occupants and residents in the surrounding community. Regional access to/from the Project site is provided via Interstate 215 and State Route 60, located approximately 4.15 miles west and 1.85 miles north from the Project site, respectively. The City's Local Hazard Mitigation Plan, adopted on October 4, 2011, and revised in 2017 contains a map of emergency evacuation routes in the community that includes Interstate 215, State Route 60, and major roadways to which the Project will connect.

As such, the Project would not result in the implementation or operation of any new project features that would result in impairment or interference with an adopted emergency response plan or emergency evacuation plan. The impact would be **less than significant**.

Threshold 7: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Project site is not located within a CAL FIRE Very High Fire Hazard Severity Zone, and the Project involves full development of the Project site to an urban setting, further reducing potential wildfire hazards. Section 4.20, Wildfire, did not identify significant impacts associated with wildfire. Further, the analysis in Section 4.15, Public Services, did not identify potential impacts associated with demand on emergency response and fire response public services, and Section 4.17, Transportation, did not identify potential impact associated with emergency access and response as a result of the Project. As such, the Project would not expose people or structures to wildland fires, and a **less than significant impact** would occur.

4.9.5 Significance of Impacts Before Mitigation

Threshold 1: Routine Transport, Use, or Disposal

Construction and operation of the proposed Project would not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts would be **less than significant**.

Threshold 2: Reasonably Foreseeable Upset and Accident Conditions

Grading and excavation activities associated with construction of the proposed Project could result in releases of hazardous materials from impacted soils and soil vapor. During operation, contaminated groundwater could be released to the on-site lakes, or incidentally from former agricultural wells. Impacts would be **potentially significant**.

Threshold 3: Hazardous Materials within One-Quarter Mile of a School

As discussed under Threshold 2, construction and excavation activities could result in releases of hazardous materials from impacted soils, which could also cause emissions of hazardous materials within 0.25 miles of a school. Impacts would be **potentially significant**.

Threshold 4: Cortese List Site

The Project site is not located on a Cortese list site, nor has it been impacted by a Cortese list site. **No impact** would occur.

Threshold 5: Safety Hazards Related to Airports

The Project site is not located within an airport influence area and would not be impacted by noise or safety hazards due to nearby airports. **No impact** would occur.

Threshold 6: Impair or Interfere with an Emergency Plan

Implementation of the Project would not impair or interfere with an adopted emergency response plan or emergency evacuation plan. The impact would be **less than significant**.

Threshold 7: Expose People or Structures to Wildland Fires

The Project site is not located within a fire hazard severity zone, and would not result in exposure to people or structures to wildfires. A **less than significant impact** would occur.

4.9.6 Mitigation Measures

4.9.6.1 Previously Adopted Mitigation Measures

1999 EIR

No mitigation was required.

2005 Addendum

No mitigation was required.

4.9.6.2 Project Mitigation Measures for the 2024 SEIR

MM-HAZ-1 Site Characterization and Remediation. Following Project design finalization, but prior to the issuance of a grading permit, the Project applicant/developer or their designated contractor shall retain a qualified environmental consultant to conduct subsurface investigations to fully characterize the nature and extent of contamination at the Project site. The investigation will include preparation of a soil sampling and analysis plan (SAP), which will be reviewed and signed by a registered engineer or geologist with experience in site characterization. The SAP shall take into account final design and proposed development of each area, including grading and excavation depths, building use and occupancy (commercial vs residential), and other features which could indicate applicable screening levels and screening requirements. The SAP shall include methods and procedures to evaluate areas of the Project site where there are known soil impacts, including the former tank storage areas, vehicle maintenance areas, areas with elevated metals and pesticides, and sludge application areas. Soil sampling shall include at least two depths at each sample location to properly characterize potential subsurface impacts, and shall include analysis for petroleum hydrocarbons, VOCs, SVOCs, and metals. Samples from at least two different depths shall be collected from more than two locations in each area of concern to properly characterize each area, including, at a minimum, each former UST location, each sludge application area, the vehicle maintenance and storage area, the wash down area, and areas with elevated metals and pesticides in surface soil samples (identified in the 1993 Phase II ESA) (shown in red and yellow on Figure 4.9-1). Soil vapor samples shall be collected in the UST, maintenance, washdown, and sludge application areas, at dual depths, to properly characterize potential soil and soil vapor contamination due to historical site uses. The SAP shall include applicable regulatory screening levels for both soil and soil vapor based on proposed site development. Site investigation will be conducted as outlined in the SAP.

For soils, based on the results of the sampling and analysis and comparison to applicable regulatory screening levels, a soil management plan (SMP) shall be prepared by a qualified environmental consultant. The SMP shall outline the proper screening, handling, characterization, transportation, and disposal procedures for contaminated soils on the Project site. The SMP shall outline criteria for reuse on site, based on the final development plan and land use in each area, including comparison to regulatory screening levels. The SMP shall include procedures for removal and disposal of soils that do not meet reuse criteria, including transportation, documentation, and landfilling requirements. The SMP shall include health and safety and training procedures for workers who may come in contact with contaminated soils, and will include health and safety and site control measures to prevent contaminated material emissions from the site (such as dust suppression and vehicle tracking). The SMP shall be implemented by the Project applicant or their designated contractor for all confirmed and suspected contaminated soils which require excavation and off-site disposal. The SMP shall also include procedures for the identification and proper abandonment of underground storage tanks, should any be identified during demolition and construction activities around the existing dairies and residences. The SMP shall include all applicable federal, state, and local regulations (including Riverside County Department of

Environmental Health) associated with handling, excavating, and disposing of contaminated soils; the proposed disposal facility that will accept the contaminated soils; and appropriate procedures, notifications, permitting requirements, handling, and disposal requirements for decommissioning any underground storage tanks.

For soil vapor, based on the results of the sampling and analysis and comparison to applicable regulatory screening levels, a soil vapor mitigation plan (SVMP) shall be prepared by a qualified environmental consultant. The SVMP shall outline appropriate vapor mitigation methods for any proposed on-site buildings in areas where elevated soil vapor concentrations are identified above the applicable screening levels for the proposed land use (open space, residences, schools, etc.). The SVMP shall be prepared with consideration of the SMP, as excavation of impacted soils may reduce soil vapor impacts. Vapor mitigation design features shall be implemented in accordance with the DTSC Vapor Intrusion Mitigation Advisory for all future residential buildings and enclosed structures in areas where soil vapor is present above applicable regulatory screening levels for the proposed land use. The construction contractor shall incorporate vapor mitigation design features into building plans that reduce potential vapor intrusion in buildings and enclosed structures on the Project site to below applicable screening levels. Vapor mitigation systems may be passive or active in nature, so long as they are designed to prevent vapor contamination in accordance with applicable DTSC regulations. Vapor mitigation systems shall be reviewed and approved by the permitting agency(ies) prior to construction and prior to issuance of any certificate of occupancy. Operation of the Project shall maintain functionality of these features as required to ensure protection from vapor intrusion. Following completion of construction and occupancy of the buildings, indoor air monitoring shall occur once every 6 months for 1 year to verify implemented measures are functioning properly and adequately mitigating vapor intrusion to below residential screening levels. If indoor air samples indicate vapor intrusion occurring at levels above applicable regulatory screening levels, modifications shall be made, as necessary, to the designed system to improve the efficacy in reducing vapor intrusion to below applicable screening levels.

MM-HAZ-2 Characterization and Closure of Dump Sites. Buried and open dump site areas identified on site shall be characterized to define nature and extent of waste and potential contamination in surrounding soils and soil vapor. Soil shall be sampled and analyzed for VOCs, metals, petroleum hydrocarbons, and SVOCs, while soil vapor will be analyzed for VOCs and methane. The full lateral and vertical extent of the waste shall be characterized and limits of both waste fill and contamination, if any, shall be determined based on this sampling and analysis. The results, along with a proposed closure plan, shall be submitted to Riverside County DEH Environmental Cleanup Program for review and approval. Closure requirements will depend on the nature and extent of contamination and shall ultimately be approved by Riverside County DEH in accordance with their rules and regulations. Excavation of the dump site area, if any, including exploration test pits, shall be conducted following SCAQMD Rule 1150. Final closure requirements shall be included in grading and development plans. If excavation is required, excavated wastes shall be appropriately characterized and landfilled at a permitted off-site landfill in accordance with federal, state, and local rules and regulations. The excavation shall be backfilled with either on-site soils or clean fill. Should imported fill be required, it shall meet clean fill requirements established by DTSC in its 2001 Information Advisory Clean Imported Fill Material Fact Sheet.

MM-HAZ-3 Water Quality Evaluation and Treatment. Prior to any groundwater extraction or use for filling and maintenance of the proposed lakes, groundwater quality shall be evaluated by collecting and analyzing water samples and comparing the analysis results to applicable water quality standards under the oversight of the Santa Ana Regional Water Quality Control Board (SARWQCB). Water quality standards shall be determined based on the proposed beneficial use of the lake, and include Environmental Screening Levels (ESLs) for freshwater ecotoxicity, as published by the Regional Water Quality Control Board in 2019, and Water Quality Objectives (WQO) for inland surface waters, as described in the Santa Ana Regional Water Quality Control Board's 2019 Santa Ana River Basin Plan. In the event groundwater quality does not satisfy applicable standards, water treatment systems shall be employed to ensure that groundwater discharged into the on-site lake meets all applicable water quality standards to the satisfaction of the SARWQCB. The treatment system shall be implemented and maintained as required by SARWQCB to ensure water quality standards continue to be met for the application of groundwater to the lakes for the duration of the Project, or until groundwater is no longer used to fill the lakes. Sampling shall occur on a regular basis (at least annually) and results maintained for review by the SARWQCB and/or permitting agencies (EMWD, City of Moreno Valley) upon request. In the event groundwater treatment is insufficient to achieve water quality standards or is infeasible, groundwater shall not be discharged to the lakes.

MM-HAZ-4 Groundwater Well Decommissioning. Wells formerly used for irrigation on the site (Filaree, Scott, and Coray) that will not be used for Project operation shall be destroyed in accordance with applicable regulations subject to the following limitations. The Scott well (UCR Scott) has been identified as a "Representative Monitoring Point" for the Moreno Valley Production Area in the Groundwater Sustainability Plan (GSP) for the San Jacinto Groundwater Basin. As such, the Scott well shall be protected as part of the Project, or a replacement well shall be installed. The Project applicant shall coordinate with Eastern Municipal Water District (EMWD), which acts as the Groundwater Sustainability Agency for the San Jacinto Basin, to either protect the Scott well or install an alternate well.

A well management plan shall be prepared for the former agricultural wells, Filaree, Scott, and Coray. The management plan shall be written in accordance with applicable state and local laws, including those of Riverside County Department of Environmental Health (DEH) and submitted to Riverside County DEH for review and approval. A copy of the approved management plan shall be provided to EMWD within 10 business days of receiving the approval from Riverside County DEH. The plan shall include proposed protection measures for wells necessary for Project site operation and/or monitoring related to the GSP and shall include proposed destruction procedures for wells to be destroyed. The plan shall also outline necessary permits, notifications, and reports required per rule and regulation, such as submittal of an abandonment report to Riverside County DEH. The approved management plan shall be followed, and on-site wells destroyed or protection measures put in place prior to construction in accordance with applicable laws and regulations.

4.9.7 Significance of Impacts after Mitigation

Threshold 1: Routine Transport, Use, or Disposal

Construction and operation of the Project would not result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts would be **less than significant**, and no mitigation is required.

Threshold 2: Reasonably Foreseeable Upset and Accident Conditions

Grading and excavation activities associated with construction of the Project could result in releases of hazardous materials from impacted soils and soil vapor. **MM-HAZ-1** requires characterization and evaluation of soil and soil vapor, and appropriate controls through a soil management plan (SMP) and a soil vapor mitigation plan (SVMP), which would mitigate impacts related to contaminated soils. The former dump site areas would be characterized and closed as described in **MM-HAZ-2**, mitigating impacts, including methane impacts to **less than significant with mitigation**.

During operation, contaminated groundwater could be released to the on-site lakes or incidentally from former agricultural wells. Characterization and treatment of groundwater (**MM-HAZ-3**) and management of on-site wells (**MM-HAZ-4**) would reduce the potential for accidental release of hazardous material to **less than significant with mitigation**. Management of on-site wells (**MM-HAZ-4**) would also include procedures for communication with EMWD to either maintain or replace wells associated with ongoing GSP-related monitoring and planning

Threshold 3: Hazardous Materials within One-Quarter Mile of a School

As discussed under Threshold 2, construction and excavation activities could result in releases of hazardous materials from impacted soils, which could also cause emissions of hazardous materials within 0.25 miles of a school. **MM-HAZ-1** would characterize and evaluate soil and soil vapor impacts and requires design and implementation of appropriate controls, ultimately mitigating impacts to **less than significant with mitigation**.

Operation would not result in emissions of hazardous materials within 0.25 miles of a current or proposed school.

Threshold 4: Cortese List Site

The Project site is not located on a Cortese list site, nor has it been impacted by a Cortese list site. **No impact** would occur, and no mitigation is required.

Threshold 5: Safety Hazards Related to Airports

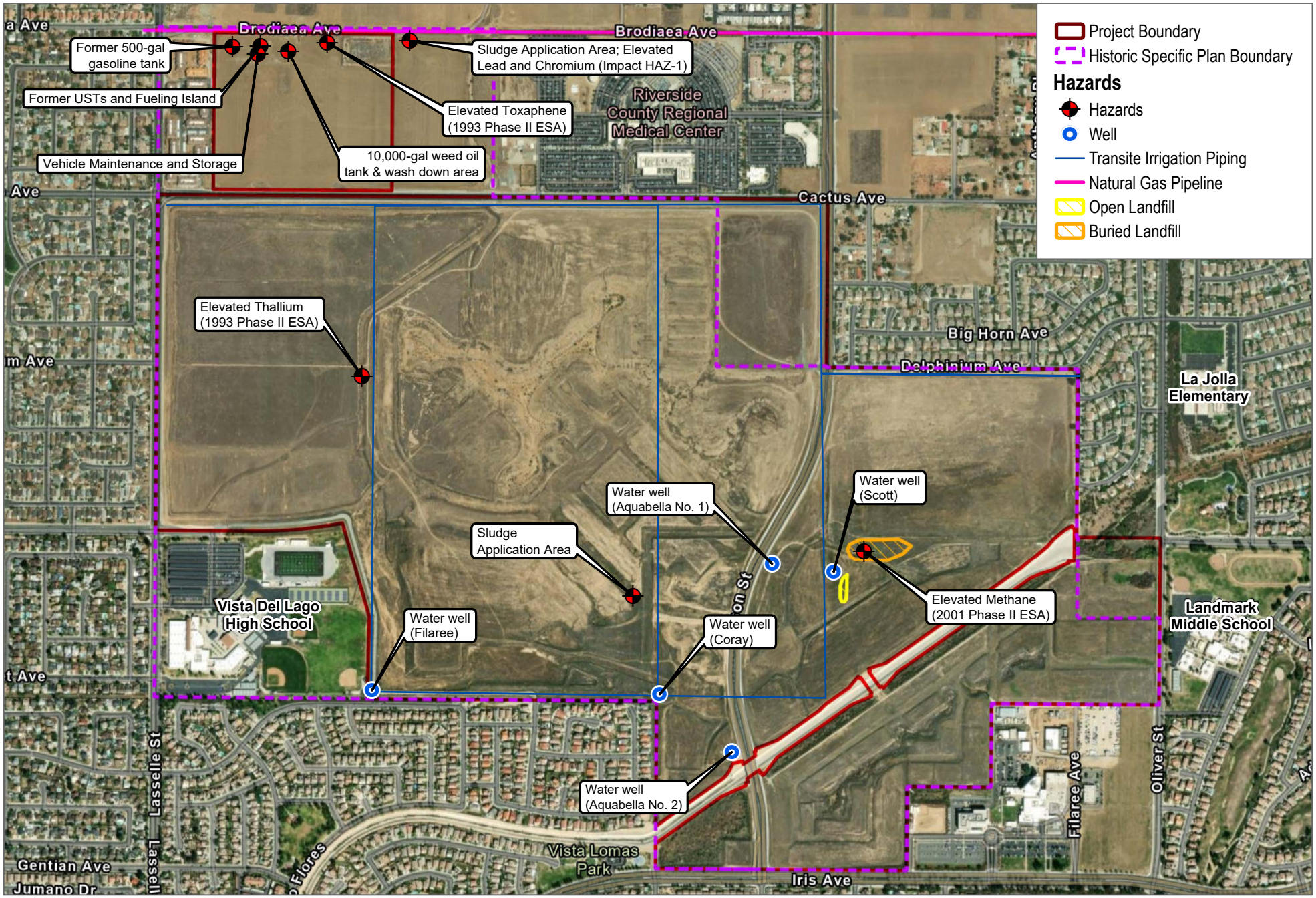
The Project site is not located within an airport influence area and would not be impacted by noise or safety hazards due to nearby airports. **No impact** would occur, and no mitigation is required.

Threshold 6: Impair or Interfere with an Emergency Plan

Implementation of the Project would result in a **less-than-significant** impact related to the potential to impair or interfere with an adopted emergency response plan or emergency evacuation plan. No mitigation is required.

Threshold 7: Expose People or Structures to Wildland Fires

The Project site is not located within a fire hazard severity zone and would not result in exposure to people or structures to wildfires. A **less than significant impact** would occur, and no mitigation is required.



SOURCE: Maxar 2022

DUDEK

0 500 1,000 Feet

FIGURE 4.9-1

Hazards

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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4.10 Hydrology and Water Quality

This section describes the existing hydrological conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, as well as surface water and groundwater quality existing conditions. This section identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found the previously approved projects would result in less than significant impacts related to hydrology and water quality (City of Moreno Valley 1999b, 2003, 2005b).

This section is based on data and information contained in the May 19, 2023, Stormwater Management Report prepared by Pacific Advanced Civil Engineering (PACE) (Appendix H); the February 6, 2023, geotechnical report prepared by Engeo Incorporated (Appendix C), the City of Moreno Valley General Plan 2040 (2040 General Plan)[1], and other public records and documents listed in Chapter 8, References.

4.10.1 Existing Environmental Conditions

The Project site is located within the San Jacinto River Watershed, which drains a 732-square-mile area of the western half of Riverside County. The headwaters are in the San Jacinto Mountains, and the San Jacinto River runs through the Railroad Canyon Reservoir (Canyon Lake), which occasionally discharges into Lake Elsinore. Due to the large amount of flood storage in Lake Elsinore, flows from the river rarely reach the Santa Ana River (San Jacinto River Watershed Council 2005). In addition to being a major flood control facility, the river also serves as a means by which groundwater basins are recharged.

Major tributaries include Bautista Creek, Poppet Creek, Potrero Creek, Perris Valley Drain, and Salt Creek. The San Jacinto River flows through the Cities of San Jacinto, Perris, Menifee, Canyon Lake, and Lake Elsinore, as well as unincorporated parts of Riverside County.

Topography

Elevations in the San Jacinto watershed vary from a maximum of 10,804 feet at San Jacinto Peak, to 1,680 feet at the mouth of the canyon near Valle Vista, to 1,382 feet at the crest of the spillway on Railroad Canyon Dam. The length of the longest watercourse in the mountainous area is about 28 miles from the headwaters to the canyon mouth, with the valley portion extending another 31.5 miles to Railroad Canyon Dam. Two major faults, the San Jacinto and the Casa Loma, traverse the watershed, nearly parallel to each other, trending in a northwesterly direction. Settlement of deep alluvial deposits between these two faults has created a shallow natural lakebed or sump in the northwest portion of the San Jacinto Valley near Lakeview (San Jacinto River Watershed Council 2005). Locally, the Project site and vicinity are characterized as generally flat with a very gentle slope from an elevation of 1,565 feet at the north to an elevation of 1,505 feet at the southern limits of the site (Appendix C). The topography

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

has been altered by cut-and-fill grading for existing large warehouses and associated roadways, resulting in level building pads surrounded by cut and fill slopes.

Stormwater Drainage

As noted above, the Project site is unimproved and relatively flat with only a slight gradient towards the south. Stormwater runoff occurs primarily as sheet flow to the south. The Riverside County Flood Control and Water Conservation District (RCFCWCD) has prepared four master drainage plans (MDPs) (Sunnymead Area, West End, Perris Valley, and Moreno), which address the three main storm channels covering different portions of the City of Moreno Valley (City). Near the Project site, existing stormwater collection mains are located within both Cactus Avenue and Nason Street. The Project site is located within the Moreno MDP (RCFCWCD 2023). As part of prior project approvals, the RCFWCD completed drainage channel improvements, including a flood control channel and a riparian buffer area, within the southeast portion of the site. In addition, all required mitigation pursuant to the applicable Clean Water Act Sections 404 and 401 and California Fish and Game Code Section 1602 permitting for the drainage channel improvements has been completed. The stormwater collection mains in the Cactus Avenue right-of-way north of the Project site, as well as in the Nason Street right-of-way within the Project site, were upsized as part of prior approvals to increase capacity.

Surface Water Quality

Stormwater runoff is a significant contributor to local and regional pollution. Urban stormwater runoff is the largest source of unregulated pollution in the waterways of the United States. Federal, state, and regional regulations require the County of Riverside to control the discharge of pollutants to the storm drain system, including the discharge of pollutants from construction sites and areas of new development.

In accordance with state policy for water quality control, the Santa Ana Regional Water Quality Control Board (SARWQCB) regulates water quality, among various other agencies, within the Santa Ana Region. Water quality objectives, plans, and policies for the surface waters within this region are established in the Santa Ana Region Basin Plan (Basin Plan), which has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. As noted above, stormwater at the Project site ultimately drains to the San Jacinto River, which has intermittent beneficial uses that include agricultural water supply, groundwater recharge, contact/non-contact recreation, warm freshwater habitat, wildlife habitat, and threatened or endangered species (SWRCB 2019).

Under the Clean Water Act Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. The U.S. Environmental Protection Agency (EPA) has approved a Section 303(d) list of water quality impairments for San Jacinto River, Canyon Lake, Lake Elsinore, Cajalco Creek, Lake Mathews, and Mockingbird Reservoir (SWRCB 2019).

Once a water body has been listed as impaired on the Section 303(d) list, a total maximum daily load (TMDL) for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standards. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general, dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline. Of the Section 303(d) listed bodies of water, the only impaired waters were Canyon Lake, which is listed on the Section 303(d) list for nutrients and pathogens, and Lake Elsinore, which is

listed on the Section 303(d) list for nutrients, organic enrichment/low dissolved oxygen, polychlorinated biphenyls, sediment toxicity, and unknown toxicity (SWRCB 2019).

Groundwater

The Project site is situated over the San Jacinto Groundwater Basin (SJGB), an alluvial groundwater basin that overlies bedrock. The SJGB is considered a closed basin with no significant natural subsurface outflows. The eastern half of the SJGB is adjudicated while the western half is unadjudicated.[2] The Project site is located in the unadjudicated western SJGB. The western SJGB is further subdivided into groundwater management zones that include Perris North, Perris South, Lakeview, Lower Pressure, and Menifee. The Project site is located in the Perris North groundwater management zone. The Department of Water Resources considers the SJGB a high priority basin in accordance with the Sustainable Groundwater Management Act, but not critically overdrafted (DWR 2023).

Groundwater in the western SJGB is primarily recharged by local precipitation, deep percolation from agricultural and urban land use, underflow from the surrounding bedrock hills, and infiltration from Lake Perris, which has had a long-term influence on the underlying groundwater ever since construction of the Lake Perris dam in the 1970s. Due to the low rainfall average in the region, this natural recharge is relatively low.

The San Jacinto Basin Groundwater Sustainability Plan indicates that groundwater water levels in the basin have increased in the area since the 1970s, despite prolonged periods of drought. The West San Jacinto Groundwater Management Area 2020 Annual Report shows continuing groundwater improvements in quality and quantity in the Project area over the prior 5 years (EMWD 2021a).

At the Project site, there are three existing former irrigation wells, known as the Filaree, Coray, and Scott wells (See Figure 4.9-1). In addition, two wells were installed at the site intended for future land uses and identified as Aquabella Well No. 1 and No. 2 (See Figure 4.9-1) (RBF 2008a, 2008b). Aquabella Well No. 1 was completed to a depth of 755 feet below ground surface (bgs), and, at the time of installation in 2008, had a water level of 111 feet bgs. Aquabella Well No. 2 was completed to a depth of 595 feet bgs and in 2008 had a groundwater level of 121 feet bgs (RBF 2008b). During a more recent well evaluation in 2023, groundwater levels were reported at 72 feet bgs in Aquabella Well No. 1 and 86 feet bgs in Aquabella Well No. 2, showing increased water levels since their completion (Wallace Group 2023a).

Beginning in late 2020, Eastern Municipal Water District (EMWD) began construction on the Perris North Groundwater Program, which is intended to further improve groundwater quality. The irrigation well known as the Scott well is used as part of EMWD's regional water monitoring efforts.

Groundwater Quality

Historically, groundwater in the SJGB has been of sufficient quality for domestic, irrigation, and industrial purposes. Total dissolved solids (TDS), a measurement of the combined total organic and inorganic substances (e.g., minerals, salts, and organic matter), is considered a general indicator of water quality and along with nitrate are among the

[2] Adjudicated areas are groundwater basins or defined portions of basins where Watermasters are created or appointed by court order to manage groundwater rights of all the overliers and appropriators. The Watermaster is typically required to report periodically to the court groundwater elevation data, annual aggregated data on groundwater extraction volumes, total storage, and surface water supply used for recharge.

primary constituents of concern. Groundwater quality has been adversely affected by both natural and anthropogenic (human caused) activities.

The primary natural conditions that impact water quality are the location of the basin in a semi-arid environment and lack of groundwater interchange with adjacent basins, both of which contribute to areas of naturally brackish groundwater in the SJGB Plan Area (EMWD 2021b). Additionally, groundwater flow along the San Jacinto Fault Zone (including the Casa Loma Fault) moves boron and fluoride from deeper formations into the water bearing strata in the basin and can cause locally elevated groundwater temperatures (EMWD 2021b).

Anthropogenic activities have exacerbated naturally occurring water quality issues and introduced additional contaminants through release of pollutants from both point sources (i.e., single point of discharge) and non-point sources (i.e., diffuse discharges). Historical and ongoing agricultural land use is the principal non-point source of groundwater quality degradation within the basin. Agricultural practices have resulted in elevated concentrations of salt and nutrients (nitrogen and phosphorous), particularly in the Perris South, the southern part of the Perris North, and the western part of the Lakeview groundwater management zones.

The groundwater quality of the basin has also been affected by use of imported surface water from both the Sacramento-San Joaquin Delta (State Water Project) and the Colorado River. Water originating from the Colorado River typically contains high TDS and low levels of nutrients, whereas water originating from the State Water Project has low TDS and higher concentrations of nutrients. During droughts, an increased percentage of water delivered to the SJGB Plan Area is from the Colorado River and the water delivered by the State Water Project becomes increasingly saline. Salt and nutrient accumulation in the groundwater has been a focus of management and regulatory actions in the basin over the last 30 years (EMWD 2021b). In addition to regional sources of water quality degradation, point source contaminants from industrial, service commercial (e.g., gas stations, dry cleaners, etc.), and military facilities have locally affected water quality with specific contaminants such as fuels, perchlorate, and PFAS/PFOS.

As also discussed in Section 4.9, Hazards and Hazardous Materials, groundwater quality at the site was evaluated in 2008 and then more recently in 2023. In 2008, analytical results indicated high pH in deeper zones, high TDS in shallow zones, and high vanadium in Aquabella No. 2, all of which were above regulatory drinking water standards (California Department of Public Health secondary Maximum Contaminant Levels and notification level for unregulated chemicals) (RBF Consulting 2008a, 2008b). The sampling of the two wells (Aquabella Well No. 1 and 2) in 2023 indicated that total coliform bacteria were present in each well, nitrate levels were relatively close to—but below—the maximum contaminant level for drinking water (10 milligrams per liter [mg/L]) at concentrations of 7.6 and 9.8 mg/L, and perchlorate concentrations were found at concentrations of 0.007 and 0.004 mg/L, compared to a maximum contaminant level of 0.006 mg/L (Wallace Group 2023b).

Flood Hazards

Flooding susceptibility in Riverside County is primarily associated with several major stream drainages, including, but not limited to, the Santa Ana River, the San Jacinto River, and the Whitewater River, as well as smaller scale and flash flood events on many of the alluvial fans that flank hillsides throughout Riverside County. Large-scale developments have utilized golf courses and greenbelts as part of a network of channels that collect flood flows and disperse them on the downstream side.

The southern portion of the Project site was previously located within Federal Emergency Management Agency (FEMA) Zone A on the Flood Insurance Rate Map, which is defined as having a 1% annual chance of flooding (also known as the

100-year flood zone) with no defined base flood elevation (FEMA 2023a). However, as a result of prior flood control improvements, the southern portion of the site is no longer located within the 100-year flood zone, and Zone A is almost entirely contained within the "F Line" drainage channel (FEMA 2023b).

Flooding can occur from severe rainfall but also from dam failure that can inundate areas downstream. Dam inundation is flooding caused by the release of impounded water from structural failure or overtopping of a dam. Portions of Moreno Valley are subject to dam inundation from two dams: Pigeon Pass Dam (Poorman's Reservoir, located north of the Project site) and Perris Dam, located south of the Project site. According to the EIR prepared for the 2040 General Plan, failure of the Pigeon Pass Dam could result in extensive flooding along the downstream watercourse (City of Moreno Valley 2021a). However, the reservoir does not retain water throughout the year. Failure of the Perris Dam would only affect a very small area south of Nandina Avenue along the Perris Valley storm drain and the Mystic Lake area in the southeast corner of Moreno Valley. The Project site is not located in the potential dam inundation area of either dam (DSOD 2023).

4.10.2 Regulatory Framework

Federal

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to the enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA) (33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

Section 303 of the Clean Water Act (Beneficial Use and Water Quality Objectives)

The SARWQCB is responsible for the protection of the beneficial uses of waters within the Project area. The SARWQCB uses its planning, permitting, and enforcement authority to meet its responsibilities adopted in the Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the SARWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan for the Santa Ana Region has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. Under CWA Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The SARWQCB has developed TMDLs for select reaches of water bodies.

Section 401 of the Clean Water Act (Water Quality Certification)

Section 401 of the CWA requires that an applicant for any federal permit (e.g., a U.S. Army Corps of Engineers Section 404 permit) obtain certification from the state, requiring that discharge to waters of the United States would comply with provisions of the CWA and with state water quality standards. For example, an applicant for a permit

under Section 404 of the CWA must also obtain water quality certification per Section 401 of the CWA. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers prior to discharging dredged or fill material into waters of the United States unless such a discharge is exempt from CWA Section 404. For the Project area, the SARWQCB must provide the water quality certification required under Section 401 of the CWA.

Section 402 of the Clean Water Act (NPDES)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit program, as authorized by Section 402 of the CWA, was established to control water pollution by regulating point sources that discharge pollutants into waters of the United States (33 USC 1342). In California, EPA has authorized the State Water Resources Control Board (SWRCB) permitting authority to implement the NPDES program.

Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES Program to address stormwater discharges from construction sites that disturb land equal to or greater than 1 acre and less than 5 acres (small construction activity). The regulations also require that stormwater discharges from small municipal separate storm sewer systems (MS4s) be regulated by an NPDES General Permit for Storm Water Discharges Associated with Construction Activity, Order No. 99-08-DWQ (i.e., the General Construction Permit). Based on this document, it is the responsibility of applicants to obtain coverage under the General Construction Permit and develop a stormwater pollution prevention plan (SWPPP), which describes best management practices (BMPs) the discharger would use to protect stormwater runoff. The BMPs must be designed to prevent, to the maximum extent practicable, an increase in the sediment yield and flow velocity from pre-construction/pre-development conditions, and to ensure that applicable water quality standards, including TMDL waste allocations, are met.

The SWPPP must contain a visual monitoring program, a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs, and a sediment-monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. On September 2, 2009, the SWRCB issued a new NPDES General Permit for Storm Water Associated with Construction Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) that became effective July 1, 2010, and was subsequently amended by 2010-0014-DWQ and 2012-0006-DWQ.

Section 404 of the Clean Water Act

Section 404 of the CWA established a permitting program to regulate the discharge of dredged or fill material into waters of the United States, which include wetlands adjacent to national waters (33 USC 1344). This permitting program is administered by the U.S. Army Corps of Engineers and enforced by EPA.

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program in order to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The act also required the identification of all floodplain areas within the United States and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing Flood Insurance Rate Maps that delineate the areas of known special flood hazards and their risk applicable to the community. The program encourages the adoption and enforcement by local

communities of floodplain management ordinances that reduce flood risks. In support of the program, FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

State

Senate Bill 610 and Senate Bill 221: Water Supply Assessments and Water Supply Verifications

Senate Bill (SB) 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record to serve as evidentiary basis for an approval action by a city or county on such projects. Under California Water Code Section 10912(a), projects subject to the California Environmental Quality Act (CEQA) requiring a water supply assessment include residential development of more than 500 dwelling units; shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; hotel, motel, or both having more than 500 rooms; industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area; mixed-use projects that include one or more of the projects specified; or a project that would demand an amount of water equivalent to or greater than the amount required by a 500 dwelling unit project. A fundamental source document for compliance with SB 610 is the urban water management plan (UWMP), which can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a subdivision map with more than 500 dwelling units on the applicant verifying that the public water supplier has sufficient water available to serve the proposed development.

California Water Code Sections 10610 et seq., Urban Water Management Planning Act

California urban water providers are required by state law to develop a UWMP to ensure sufficient water supplies are available to meet the long-term needs of its customers during normal, dry, or multiple-dry years. The Urban Water Management Planning Act requires urban water suppliers, which provide water for municipal purposes to more than 3,000 customers or supply more than 3,000 acre-feet of water annually, to develop an UWMP every 5 years, in the years ending in 0 and 5.

In the act, the California Legislature declared that the waters of the state are a limited and renewable resource subject to ever increasing demands, that the conservation and efficient use of urban water supplies are of a statewide concern, that successful implementation of plans is best accomplished at the local level, that conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources, that conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions, and that urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

EMWD, the water supplier for the City, prepared it's 2020 UWMP in compliance with the requirements of the act, as well as the additional reporting requirements of the Water Conservation Act of 2009. The EMWD 2020 UWMP is an update of its 2015 UWMP and addresses the water supply sources, projected demands, and supply reliability for EMWD.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739, SB 1168, and SB 1319—collectively known as the Sustainable Groundwater Management Act (SGMA), which requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. The deadline for high- and medium-priority basins to reach sustainability is 2042. Through SGMA, the California Department of Water Resources provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to prepare groundwater sustainability plans (GSPs) for crucial (i.e., medium- to high-priority) groundwater basins in California. Adjudicated basins are exempt from developing a GSA or GSP. EMWD Board of Directors is the GSA for the West San Jacinto Groundwater Basin and is responsible for development and implementation of the GSP, which was published in September 2021 (EMWD 2021b).

California Porter-Cologne Water Quality Control Act

Since 1973, the SWRCB and its nine Regional Water Quality Control Boards (RWQCBs) have been delegated the responsibility for administering permitted discharge into the waters of California. The Project site falls within the jurisdiction of the SARWCQB. The Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.; 23 CCR Division 3, Chapter 15) provides a comprehensive water-quality management system for the protection of California waters. Under the act, "any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state" must file a report of the discharge with the appropriate RWQCB. Pursuant to the Act, the RWQCB may then prescribe "waste discharge requirements" that add conditions related to control of the discharge. Porter-Cologne defines "waste" broadly, and the term has been applied to a diverse array of materials, including non-point source pollution. When regulating discharges that are included in the federal CWA, the state essentially treats Waste Discharge Requirements and NPDES as a single permitting vehicle. In April 1991, the SWRCB and other state environmental agencies were incorporated into the California Environmental Protection Agency.

The RWQCB regulates urban runoff discharges under the NPDES permit regulations. NPDES permitting requirements cover runoff discharged from point (e.g., industrial outfall discharges) and nonpoint (e.g., stormwater runoff) sources. The RWQCB implements the NPDES program by issuing construction and industrial discharge permits.

Under the NPDES permit regulations, BMPs are required as part of a SWPPP. The EPA defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the United States." BMPs include "treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage" (40 CFR 122.2).

California Green Building Standards Code

The California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations is designed to improve public health, safety, and general welfare by using design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices. The standards provide mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High-Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the Federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the state (e.g., isolated wetlands and groundwater), not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual basin plans, such high quality shall be maintained, and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource.

California Toxics Rule

EPA has established water quality criteria for certain toxic substances via the California Toxics Rule. The California Toxics Rule established acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries, that are designated by each RWQCB as having beneficial uses protective of aquatic life or human health.

California Water Code

The California Water Code includes 22 kinds of districts or local agencies with specific statutory provisions to manage surface water. Many of these agencies have statutory authority to exercise some forms of groundwater management. For example, a Water Replenishment District (California Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, while a Water Conservation District (California Water Code Section 75500 et seq.) can levy groundwater extraction fees. Through special acts of the legislature, 13 local agencies have been granted greater authority to manage groundwater. Most of these agencies, formed since 1980, have the authority to limit export and control some in-basin extraction upon evidence of overdraft or the threat of an overdraft condition. These agencies can also generally levy fees for groundwater management activities and for water supply replenishment.

Assembly Bill 3030 – Groundwater Management Act

In 1992, Assembly Bill 3030 was passed, which increased the number of local agencies authorized to develop a groundwater management plan and set forth a common framework for management by local agencies throughout California. These agencies could possess the same authority as a water replenishment district to “fix and collect fees and assessments for groundwater management” (California Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (California Water Code Section 10754.3).

Local

Santa Ana River Basin Plan

The SARWQCB has prepared the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan), which establishes water quality objectives, beneficial uses, and anti-degradation policies for the region (SWRCB 2019). The Project site is located within the Perris-North Management Zone and the San Jacinto River Basin.

Water quality objectives established for inland surface waters include, among other objectives, toxic substances. As stated in Chapter 4 of the Santa Ana River Basin Plan, "toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health. The concentrations of contaminants in waters which are existing or potential sources of drinking water shall not occur at levels that are harmful to human health. The concentrations of toxic pollutants in the water column, sediments, or biota shall not adversely affect beneficial uses" (SWRCB 2019).

General Waste Discharge Requirements for De Minimus Discharges

On June 19, 2015, the SARWQCB adopted the General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality (Order No. R8-2015-0004, NPDES No. CAG998001). This permit regulates the discharge of groundwater and non-stormwater construction dewatering waste to surface waters (including estuarine and ocean waters) that pose an insignificant threat to water quality in the Santa Ana Region. Under this permit, discharges must comply with discharge specifications, receiving water and groundwater limitations, and monitoring and reporting requirements detailed in the permit.

The County of Riverside is a co-permittee under the NPDES Permit for the RCFCWCD (i.e., County of Riverside MS4 permit). The NPDES permit sets limits on pollutants being discharged into waterways and requires all new development and significant redevelopment to incorporate low-impact development features, as laid out in the County of Riverside 2011 Design Handbook for Low Impact Development Best Management Practices (RCFCWCD 2011). Priority projects in the County of Riverside are required to develop and implement a water quality management plan (WQMP) to reduce pollutants, maintain and reduce downstream erosion, and maintain stream habitat from all new development. The SARWQCB has established the Water Quality Management Plan, A Guidance Document for the Santa Ana Region of Riverside County (SARWQCB 2012) (i.e., the 2012 Riverside County WQMP Template and Guidance document), as a template for completing WQMPs.

Master Drainage Plans

MDPs, as administered by the RCFCWCD, identify a conceptual network of drainage facilities needed to properly convey water at a regional level throughout portions of a city. There are four MDPs, managed by the RCFCWCD, that cover the majority of the Moreno Valley, namely the Moreno MDP, the West End MDP, the Sunnymead MDP, and the Perris Valley MDP. The MDPs address regional level facilities in Moreno Valley and provide a network of drainage facilities which, when implemented, will provide proper water conveyance to the community as development continues. The fully implemented MDPs should, in conjunction with ultimate street improvements for the area within the plan boundaries, contain the 100-year frequency flows. The MDPs identify preferred facility alignments, sizing, and right-of-way required for the future construction of MDP facilities to protect existing and future development. The MDPs are intended to be used as a guide for future developments and such developments shall be required to conform to the MDPs.

City of Moreno Valley Municipal Code

Title 8 of the City of Moreno Valley Municipal Code (Municipal Code) contains a number of regulations that address hydrology and water quality. Chapter 8.10, Stormwater/Urban Runoff Management and Discharge Controls, contains requirements that address reducing pollutants in stormwater discharges to protect and enhance the water quality of local watercourses. In addition to requiring a NPDES permit, Municipal Code Section 8.10.050 specifies that new development and significant redevelopment control stormwater runoff so as to prevent any deterioration of water quality through the identification of BMPs. The BMPs may include, but are not limited to, the following (Municipal Code Section 8.10.050):

1. Increase permeable areas by leaving highly porous soil and low-lying areas undisturbed; by incorporating landscaping, green roofs and open space into the project design; by using porous materials for or near driveways, drive aisles, parking stalls and low volume roads and walkways; and by incorporating detention ponds and infiltration pits into the project design.
2. Direct runoff to permeable areas by orienting it away from impermeable areas to swales, berms, green strip filters, gravel beds, rain gardens, pervious pavement or other approved green infrastructure and French drains; by installing rain gutters oriented towards permeable areas; by modifying the grade of the property to divert flow to permeable areas and minimize the amount of stormwater runoff leaving the property; and by designing curbs, berms or other structures such that they do not isolate permeable or landscaped areas.
3. Maximize stormwater storage for reuse by using retention structures, subsurface areas, cisterns, or other structures to store stormwater runoff for reuse or slow release.
4. Rain gardens may be proposed in-lieu of a water quality basin when applicable and approved by the city engineer.

Chapter 8.12, Flood Damage Prevention and Implementation and National Flood Insurance Program (NFIP), provides regulations to minimize public and private losses due to flood conditions. Projects located within special flood hazard areas as identified by FEMA are required to obtain development permits. Construction within the special flood hazards areas is required to use standards of constructions set forth in Municipal Code Section 8.12.170, including anchoring measures, flood resistant construction materials, and adequate elevation and flood proofing. Chapter 8.21, Grading Regulations, includes the requirement for all projects that require a grading plan to also submit an erosion control plan. Pursuant to Municipal Code Section 8.21.160(B), erosion control plans are required to include details of protective measures, including desiltation basins or other temporary drainage or control measures or both, as may be necessary to protect adjoining public or private property from damage by erosion, flooding, or mud and/or debris deposits that may originate from the site or result from the grading operations. Additionally, Municipal Code Section 8.21.160I requires the containment of all sediment, stating that runoff from disturbed areas is required to be detained or filtered by berms, swales, ditches, filter strips, or other means as necessary to prevent the escape of sediment from the site.

Moreno Valley General Plan

Open Space & Resource Conservation Element

The Open Space & Resource Conservation Element of the 2040 General Plan includes goals and policies related to hydrology and water quality. The following goals and policies from the 2040 General Plan apply to the Project (City of Moreno Valley 2021b):

Goal OSRC-1: Preserve, protect, and enhance natural resources, habitats, and watersheds in Moreno Valley and the surrounding area, promoting responsible management practices.

Policy OSRC.1-2: Support regional efforts to preserve, protect, and enhance environmentally sensitive areas, including hillsides, canyon areas, wildlife corridors, natural watercourses, and riparian areas in and adjacent to the planning area.

Policy OSRC.1-5: Design stormwater detention basins as multi-use amenities providing recreation, aesthetic value, and wildlife habitat along with flood control.

Policy OSRC.1-7: Require that grading plans include appropriate and feasible measures to minimize erosion, sedimentation, wind erosion and fugitive dust. Particularly in hillside areas, new roadways and trails should follow natural contours to minimize grading.

Policy OSRC.1-17: Continue to participate in regional efforts to proactively manage surface and groundwater resources and ensure their long-term health and viability, including the development and implementation of the San Jacinto Groundwater Basin Groundwater Sustainability Plan (Basin Plan).

Policy OSRC.1-18: Preserve natural drainage courses in their natural state to the extent feasible.

Policy OSRC.1-19: Maximize the amount of pervious surfaces in public spaces to permit the percolation of urban runoff while implementing best practices for stormwater pollution prevention.

Policy OSRC.1-20: Facilitate groundwater recharge in Moreno Valley by encouraging development projects to use Low Impact Development (LID) practices such as bioretention, porous paving, and rainwater harvesting systems, and by encouraging private property owners to design or retrofit landscaped or impervious areas to better capture storm water runoff.

Policy OSRC.1-21: Continue to regulate new commercial and industrial activities as well as construction and demolition practices to minimize discharge of pollutants and sedimentation into the stormwater drainage system.

Policy OSRC.1-22: Allow new development to use individual wells only where an adequate supply of good quality groundwater is available.

Safety Element

The following goals and policies from the Safety Element of the 2040 General Plan apply to the Project (City of Moreno Valley 2021b):

Goal S-1: Protect life and property from natural and humanmade hazards.

Policy S.1-7: Design, construct and maintain street and storm drain flood control systems to accommodate 10-year and 100-year storm flows respectively, employing "green infrastructure" techniques as feasible and appropriate. The storm drain system shall conform to Riverside County Flood Control and Water Conservation District master drainage plans and the requirements of the Federal Emergency Management Agency.

Policy S.1-8: Permit in the 100-year floodplain only that development which represents an acceptable use of the land in relation to the hazards involved and the costs of providing flood control facilities. Locate critical facilities, such as hospitals, fire stations, police stations, public administration buildings, and schools outside of flood hazard areas.

Policy S.1-9: Encourage project designs that minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize best management practices (BMPs) to reduce stormwater runoff and minimize increases in downstream runoff resulting from new development.

Policy S.1-10: Through development agreements and compliance with adopted master drainage plans and existing regulations, require that new development provide necessary storm drainage improvements and ensure that upstream stormwater generators fully address stormwater needs on their property.

Policy S.1-11: Continue participation in the National Flood Insurance Program (NFIP) and the Community Rating System to ensure that the City is incentivized to reduce the risk of damage from flooding and improve flood preparedness.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

4.10.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to hydrology and water quality resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to hydrology and water quality resources would occur if the Project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.

3. Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surface, in a manner which would: (i) result in substantial erosion or siltation on or off site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows.
4. In flood hazards, tsunami, or seiche zones, risk release of pollutants due to Project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.10.4 Impact Analysis

4.10.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR determined that impacts to hydrology were less than significant after mitigation. Drainage improvements would be required to handle estimated flows throughout the site, as described in the original SP 218. The storm drains proposed in the 1999 EIR would have modified but retained the major drainage features on site. The original SP 218 anticipated southern extension of the Morrison Street and Nason Street storm drains to connect with the swale in the southeastern portion of the site. The Moreno Area Drainage Plan conveyed the original SP 218's proposed drainage. The proposed Nason Street basin would have conveyed approximately 650 cubic feet per second down Nason Street from north of Alessandro Boulevard to the grass-lined ditch within the Specific Plan Area, instead of draining approximately 1800 cubic feet per second south into a ditch adjacent to Nason Street and Cottonwood Avenue.

The original SP 218 would have also resulted in impervious surfaces and an increase in the amount of runoff. Creation of impervious surfaces on existing open fields was determined to cause an increase in the amount of runoff. The original SP 218 proposed natural grass-lined channels to run though the golf course and a series of detention ponds to capture and hold runoff flows, reducing the rates of runoff below those anticipated in the drainage plan. These grass-lined channels and detention ponds, along with golf course management practices that required that overwatering be prevented and that the application of turf chemicals be avoided when rainfall is predicted, would reduce contaminant loadings in surface runoff to a less than significant impact (City of Moreno Valley 1999b).

Mitigation

The 1999 EIR included mitigation measures to reduce the impacts to hydrology and water quality to levels less than significant, summarized below.

Drainage

It was determined that additional hydrologic analyses would need to be completed to implement the developments within the original SP 218. A more detailed Area Drainage Plan was required to be prepared and be subject to review

and approval by the appropriate federal, state, county, and city agencies prior to issuance of a grading permit. Additionally, fees on a per acre basis were to be required for drainage facilities included in the drainage plan.

If the original SP 218's proposed Nason Street basin was not to be constructed, an additional 650 cubic feet per second of flow was needed to be accommodated with the proposed drainage improvements and raised building pad elevations. A drainage study was identified as needed to quantify the flow rate to provide flood-free conditions for building pad elevations.

Runoff and Water Quality

The original SP 218 required the use of BMPs, in compliance with the CWA, for developments to control pollutants and sediment from entering stormwater runoff. Source control or treatment was required to be implemented in addition to the City's Municipal NPDES permit. Permanent, extended detention facilities were required to achieve efficient pollutant removal rates.

Sediment and Erosion

The General Construction Permit by the SWRCB required that conditions to control sedimentation and erosion, such as temporary basins or other means of stabilization or impoundment, be implemented.

Well Abandonment

The original SP 218 identified three agricultural irrigation wells located within the Specific Plan Area that needed to be abandoned according to water quality and safety standards.

The mitigation measures described in 1999 EIR reduced impacts to hydrology and water quality to less than significant.

2003 Supplemental EIR

Analysis

The hydrology and water quality analysis was determined to be consistent with the 1999 EIR.

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum determined impacts to hydrology and water quality from the 2005 Aquabella SPA would be less than those described in the previous analyses. The 2005 Addendum proposed a system of interconnected lakes and water features, instead of a golf course, that reduced the potential impacts of irrigating a golf course with an unknown amount of potable water. The 2005 Addendum identified that approximately 800–900 acre-feet per year (AFY) of tertiary reclaimed water from the EMWD treatment plant would be used to maintain the water levels in the lakes. The 2005 Addendum allowed approximately 1,000 cubic feet per second of runoff water along Morrison Street and Nason Street into the lakes in addition to the reclaimed water, after being pre-treated using

methods approved by the SARWQCB. The 2005 Addendum discussed the requirement to submit a WQMP for review and approval by SARWQCB to ensure that there were no significant long-term or short-term impacts to water quality. In addition, the 2005 Addendum determined that the proposed lake system would provide a large amount of new open water and riparian habitat for local wildlife, including waterfowl (City of Moreno Valley 2005b).

Mitigation

In addition to the Mitigation Monitoring and Reporting Program previously adopted, the 2005 Addendum required that the developer submit improvement plans for the lakes and any related flood control improvements to the RCFCWCD and the California Department of Fish and Game for review and approval prior to grading. The 2005 Addendum produced fewer impacts on water resources compared to the 1999 EIR, therefore, and would not result in any significant new, or substantially greater, impacts to hydrology and water quality beyond those identified in the 1999 EIR.

4.10.4.2 Project Impact Analysis

The Project is an amendment to the 2005 Aquabella SPA, which amended the original SP 218. This second amendment would introduce a total of 15,000 multifamily housing units to the Project site, of which 2,922 residential dwelling units were previously approved under the 2005 Aquabella SPA. The Project would expand the eastern boundary of the Project site to include an additional parcel totaling 10 acres. Additionally, the Project would include 40 acres designated for school use with up to three elementary school sites and one middle school site. Project components that were previously completed under the 2005 Aquabella SPA are not analyzed as part of this document. Impacts to hydrology and water quality are based on changes proposed by the Project and are analyzed below.

Threshold 1: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

As with the previously analyzed improvements, the Project would alter drainage patterns at the Project site. The Project would include approximately 40 acres of lakes, which would serve as multipurpose stormwater management facilities, storage for irrigation water, and recreational locations. The 2005 Aquabella SPA was the subject of an engineering analyses (WQMP) in 2005, including detailed analyses of hydrology/hydraulics, water quality, and lake design. Although some features of the Project have changed since, notably the inclusion of more residential units per acre, from a hydrologic standpoint the Project remains much like the 2005 Aquabella SPA evaluated in 2005 and again subsequently (Appendix H). A stormwater management report was prepared for the Project and demonstrates how the higher density residential units would be accomplished through buildings with more floors than previously proposed, and this change would be accompanied by the use of parking structures in many areas rather than reliance on parking lots. As a result, these changes would keep approximately the same amount of imperviousness as the previous plan, and relatively minor changes to runoff volumes, flow rates, and water quality would result (Appendix H).

RCFCWCD administers the NPDES MS4 Permit program for the Project site. Thus, the Project is still required to follow design guidelines of the Design Handbook for Low Impact Development Best Management Practices (RCFCWCD 2011). BMPs, primarily consisting of lakes but including various other BMPs, would be used to enhance water quality of runoff leaving the Project site. The majority of the Project site would drain toward the human-made lakes with additional BMPs, such as bioretention basins, used to reduce and treat runoff before stormwater is discharged to the lakes or into public waterways. Incorporation of these BMPs would improve water quality by

reducing non-point source pollutant loads to meet TMDLs and NPDES stormwater regulations consistent with NPDES MS4 Permit requirements.

Therefore, the runoff from the Project would, from a stormwater management basis, remain similar to the proposed conditions examined in the 2005 WQMP. With adherence to the existing regulatory requirements, which have become more stringent since 2005, the proposed changes from the Project would remain similar to prior approvals and less than significant.

The 1999 EIR identified abandonment of the existing irrigation wells (i.e., Filaree, Coray, and Scott wells) on site as required for water quality and safety concerns. These wells are not proposed for ongoing use. As described in Section 4.9, these wells could be impacted by contaminated soil or groundwater, and as such could provide a pathway for an accidental release of hazardous materials, if not appropriately abandoned. This impact would be **potentially significant.**

The 2005 Aquabella SPA also included the 40-acre lake that would be filled by tertiary-treated recycled water from EMWD and/or underlying groundwater resources from existing on-site groundwater wells. The Project similarly provides that the lakes would be filled by stormwater capture, tertiary-treated recycled water from EMWD, and/or underlying groundwater resources from existing on-site groundwater wells. As discussed in Section 4.19, Utilities and Service Systems, water demand from groundwater or EMWD would be necessary for both the initial filling of the lake and annual maintenance needs. The initial filling of the lakes would require approximately 400 acre-feet of groundwater, after which the lake system would require approximately 200 AFY for maintenance and to account for evaporation. As discussed in Section 4.9 and summarized above, groundwater beneath the Project site may contain elevated pH, as well as elevated concentrations of TDS, vanadium, and volatile organic compounds, based on sampling that was conducted in 2008. The 2023 sampling indicated potential concerns related to total coliform bacteria, nitrate, and perchlorate (a strong oxidant that is not a volatile organic compound but can have adverse health effects at high enough concentrations) (Wallace Group 2023b). According to a 2020 study conducted by EMWD (as part of its 2020 Perris North Groundwater Monitoring Project), a commingled volatile organic compound plume is estimated to be present beneath the southwestern portion of the Project site (EMWD 2020). Therefore, there is a potential for elevated concentrations of contaminants of concern in the groundwater that could adversely affect the proposed beneficial uses of the lake.

Strategies to reduce groundwater contaminant levels for the lake's water supply would include blending, monitoring, and adaptive management of water quality. Further, the water quality of the planned lake would be required to meet water quality objectives for inland surface waters, as described in the Basin Plan, and would be required to complete an application for discharging to surface waters under the NPDES permit program (SARWQCB 2019). Because of the uncertain groundwater quality, the impact would be **potentially significant,** and mitigation to ensure compliance with regulations and water quality standards is proposed herein.

Threshold 2: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.

As previously mentioned, the SJGB is a high priority basin, as designated by the Department of Water Resources, but not critically over-drafted (DWR 2023). The basin is managed by the EMWD Board of Directors, the GSA for the SJGB, and they have prepared and submitted a GSP, published in September 2021 (EMWD 2021b). As a water supplier for the City, EMWD has a diverse portfolio of local and imported water supplies that include recycled water, potable groundwater, desalinated groundwater, and imported water from the Metropolitan Water District of Southern California (MWD). About half of the water used in the EMWD service area is imported by MWD.

According to the water demand analysis for the Project, potable water demands for the Project would require 3,124 AFY with 209 AFY of recycled water used for landscape irrigation (Wallace Group 2023a). Recycled water lines would extend to the interior of the site. The Project would also use stormwater collected in the lakes as potential sources of irrigation water supply. According to the EMWD 2020 UWMP, EMWD has the ability to meet current and projected water demands through 2045 during normal, historic single-dry, and historic multiple-dry year scenarios (EMWD 2021c). EMWD has flexibility in its sources of water supply and does not rely solely on local groundwater for meeting current and projected water demands. Rather, EMWD's main water supply source is MWD. Based on the information provided in MWD's UWMP, MWD has sufficient supply capabilities to meet the expected demands of its member agencies from 2020 through 2045 under normal, historic single-dry, and historic multiple-dry year conditions. Thus, the Project's potable and recycled water demand would not substantially decrease water supplies or interfere substantially with groundwater recharge. Refer to Section 4.19.

Just as with the 2005 Aquabella SPA, the Project would create new impervious surfaces. However, as mentioned above in Threshold 1, the impervious surfaces resulting from changes to the number of residential units would be approximately the same with the Project as the 2005 Aquabella SPA, and as a result there would be relatively minor changes to groundwater recharge at the Project site. In addition, the implementation of the drainage control features would provide opportunities for on-site infiltration of stormwater runoff. Therefore, the potential impacts related to groundwater supplies and sustainable management of the groundwater basin due to changes in impervious surfaces and changes in groundwater recharge would be less than significant.

Groundwater supplies could also be adversely affected by the proposed groundwater extraction that may be necessary for the initial filling and/or annual maintenance of the lake. As noted above, the proposed lake may be filled with tertiary-treated recycled water from EMWD and/or underlying groundwater resources from existing on-site groundwater wells. The previously approved 2005 Addendum estimated that approximately 800–900 AFY would be required for annual maintenance. The Water Demand Analysis that has been prepared for the proposed Project estimates that approximately 400 acre-feet of groundwater would be required for initial lake filling, after which the lake system would require approximately 200 AFY for maintenance and to account for evaporation (Wallace Group 2023a). Thus, the demand for groundwater would be reduced compared to the 2005 Aquabella SPA. Further, on-site groundwater wells have demonstrated a capacity to meet the estimated demand (Wallace Group 2023b).

However, while groundwater demand is lower than the amounts estimated in the 2005 Addendum, the more recently adopted GSP for the SJGB did not considered the Project as part of the projected water demands for the region. Under projected conditions for the West SJGB, groundwater outflows are estimated to reach 48,700 AFY, which is estimated to result in a decline of groundwater in storage at an average rate of 2,400 AFY over the course of the 50-year projected hydrologic conditions (EMWD 2021b). While this projected decline would reduce groundwater in storage, there would still be a surplus in groundwater storage compared to 1985 conditions (EMWD 2021b). The effects of climate change, based on 2070 projections, are predicted to reduce the recharge from native water supplies and increase groundwater pumping to meet irrigation demands (EMWD 2021b). Therefore, the Project could exacerbate the reduction in groundwater storage beyond what was considered in the current GSP for the SJGB, which would be a **potentially significant impact** to groundwater supplies.

Threshold 3: Would the Project substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river or through the addition of impervious surface, in a manner which would: (i) result in substantial erosion or siltation on or off site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows.

As noted above in Threshold 1, the Project would alter the drainage patterns at the site compared to existing conditions. However, compared to the 2005 Aquabella SPA, the changes to impervious surfaces would remain largely similar. The proposed drainage plan includes the use of the lakes for stormwater runoff and post-construction BMPs (e.g., bioretention basins) that will be used to manage stormwater runoff before it is discharged off site. The lakes would be designed to detain all runoff and release water at a rate that is lower than the rate at which it enters the lakes. Proposed stormwater infrastructure would convey runoff from drainage areas and the proposed development into the lakes. The lakes would be used as stormwater detention basins to attenuate the peak runoff before releasing to off-site drainage facilities. The implementation of the lakes and BMPs would reduce flow rates, volumes, and pollutants from post-development runoff. The final design of the lakes and BMPs would be consistent with RCFCWCD requirements and NPDES MS4 requirements. As a result, the potential for erosion or siltation on or off site would be minimized.

The lakes would be built with enough storage capacity to capture and detain all runoff volume from a 100-year storm (Appendix H). The detained runoff would begin to discharge immediately, with the discharge rate leaving the lake significantly lower than the discharge from the Project land surfaces into the lake. Lake spillway structures would be designed to reduce peak flow rates and reduce peak discharges to not exceed pre-Project peak discharges. As a result, the proposed improvements would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site or exceed the capacity of existing or planned stormwater drainage infrastructure. The rate would not substantively increase because the increased density that is proposed as part of the Project is occurring largely through the addition of extra building floors which does not affect impervious surfaces or runoff calculations. Thus, the potential to impede flood flows would be considered relatively similar to what was previously analyzed. With implementation of the required drainage control improvements and the ability for the lakes to provide flood storage control, the potential impact related to impedance of flood flows would be **less than significant**.

Threshold 4: Would the Project risk release of pollutants due to Project inundation from flood hazards, tsunami, or seiche zones.

The Project would not include the bulk storage of hazardous materials or wastes. Hazardous materials use and storage would generally be limited to products such as fuels, oils, paints, cleaning supplies, and other consumer products that are associated with building maintenance and residential land uses. These products would be packaged in the original manufactured packaging and stored in accordance with existing regulatory requirements, which limit the potential for release even in the unlikely event they are inundated from a flooding event.

While the Project site includes a small area within a Zone A (100-year flood zone) hazard area, compared to the 2005 Aquabella SPA, the Zone A area has been substantially reduced in size and is generally limited to the "F Line" drainage channel, where no development is proposed (FEMA 2023b). The proposed drainage system would be designed to meet the County's flood control standards to protect the development and the existing floodplain that could be affected by the development of the Project. All proposed development would also be subject to the City's Municipal Code, which includes Chapter 8.12, Flood Damage Prevention and Implementation and National Flood

Insurance Plan (NFIP). This chapter provides regulations to minimize public and private losses due to flood conditions. Projects located within special flood hazard areas as identified by FEMA are required to obtain development permits prior to issuance of a building permit. Construction within the special flood hazards areas is required to use standards of constructions set forth in Municipal Code Section 8.12.170, including anchoring measures, use of flood resistant construction materials, and adequate elevation and flood proofing. Ensuring that finished first floor elevations are above anticipated flood levels would reduce the risk of release of pollutants.

The Project site is located well inland and outside of any tsunami hazard zone, such that there would be no risk of inundation due to tsunamis.

Seiche waves are created by seismic activity when ground shaking causes a sloshing effect in enclosed and semi-enclosed bodies of water. According to the geotechnical report (Appendix C) that was prepared for the Project, based on topographic and lithologic data, the risk of seiches was determined to be low to negligible at the site.

Therefore, based on the location and characteristics of the Project, along with the adherence to flood control requirements, the potential for release of pollutants due to inundation from flooding, tsunami, or seiche zones would be reduced compared to prior approvals and **less than significant**.

Threshold 5: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

During construction, the Project would be required to implement a SWPPP in accordance the NPDES Construction General Permit, which is consistent with the SARWQCB Basin Plan. All proposed improvements would be designed in accordance with NPDES MS4 Permit requirements, which is also consistent with the Basin Plan.

As discussed above in Threshold 2, the water supply for the Project would be provided by EMWD, with some potential supplementation from groundwater extracted from on-site wells to maintain the lakes. Since the 2005 Aquabella SPA, the SJGB is being managed through the adoption of the GSP in 2021 by the EMWD Board of Directors, the GSA for the basin. The Project was not considered as part of the GSP and, therefore, depending on the volumes of water that would be extracted for the initial filling of the lake, as well as annual maintenance requirements, there could be **potentially significant impacts** related to the sustainable management of the groundwater basin.

4.10.5 Significance of Impacts Before Mitigation

Threshold 1: Violate Water Quality Standards or Waste Discharge Requirements

The Project would result in **potentially significant impacts** related to the potential degradation of surface or groundwater quality.

Threshold 2: Substantially Decrease Groundwater Supplies or Interfere with Recharge

The Project would result in **potentially significant impacts** related to groundwater supplies or recharge.

Threshold 3: Substantially Alter Drainage

The Project would have a **less than significant impact** related to substantial erosion or siltation on or off site; substantial increases in the rate or amount of surface runoff in a manner which would result in flooding on or off site; runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or flood flows.

Threshold 4: Risk Release of Pollutants During Floods, Tsunamis, or Seiches

The Project would have a **less than significant impact** related to inundation from flood hazards, tsunami, or seiche zones.

Threshold 5: Conflict with or Obstruct Water Quality or Groundwater Management Plan

The Project would have a **potentially significant impact** related to conflict with a water quality control plan or a sustainable groundwater management plan.

4.10.6 Mitigation Measures

4.10.6.1 Previously Adopted Mitigation Measures

1999 EIR

MM-a) Drainage. Additional hydrologic analyses will need to be completed to implement specific developments within the Specific Plan. Design of facilities and redesignation of the 100-year floodplain requires more specific plans for development than area currently available. More detailed design specifics will be prepared for an amendment to the Moreno Area Drainage Plan, which will receive additional CEQA review. The revisions to the Area Drainage Plan and Project flood control features will be subject to the review and approval of appropriate federal, state, county, and city agencies prior to issuance of the first grading permit within the Project. Projects within the Moreno Areas Drainage Plan pay a fee. The fee pays for drainage facilities included in the drainage plan. The fee (currently $6,715 per acre) is paid when the first grading or building permit is obtained for a subdivision map.

If the Nason Street basin is not constructed, an additional 650 cfs of flow will need to be accommodated with proposed drainage improvements, and building pad elevations will need to be raised along Nason Street to provide flood free building sites.

If the Sinclair Street basin is not constructed, an increase to the 100-year event flow rate conveyed by Line 'F' would be expected. If this occurs, a drainage study should be prepared to quantify the flow rate to provide flood-free conditions for building pad elevations.

MM-b) Runoff and Water Quality. The Clean Water Act requires the use of BMPs for developments to control pollutants and sediment from entering stormwater runoff. Source control or treatment BMPs would be implemented on a city-wide basis in conjunction with the City's Municipal NPDES permit. Subsequent developments would be required to provide BMPs according to the SWRCB general NPDES permit.

The following is a description of general BMPs which would be incorporated into the design of the golf course detention basins:

To achieve efficient pollutant removal rates from an urbanized project site, the use of permanent, extended detention facilities can be employed. The detention facility provides temporary storage for increased runoff from the project site due to urbanization; the storage facility is usually a dry pond/basin system. Pollutant removal is achieved through the extended detention methods, in which sediments and chemical constituents are allowed to accumulate at the bottom of the basin through the sedimentation process. Extended detention facilitates the adequate removal of particulate pollutants. To enhance the removal of soluble pollutants, marsh planting can be provided in the bottom of the basin. Cleaning and removal of invasive vegetation would occur on a periodic basis.

The golf course operator shall develop a maintenance (dredging) schedule for removal of accumulated sediments from the detention basins proposed for the golf course. County flood control shall have a right of entry to inspect, and if needed, repair any floodway facilities. The operator shall be responsible for maintenance during construction. The golf course operator shall be responsible for normal periodic maintenance and maintenance immediately after storm events.

MM-c) Sediment and Erosion. Conditions to control sedimentation and erosion, such as temporary detention basins or other means of stabilization or impoundment, are required under the General Construction Permit by the State Water Resources Control Board. Future construction shall be in conformance with the provisions of the General Construction Permit, and these conditions will be shown on grading plans submitted to the City.

MM-d) Well Abandonment. The three irrigation wells located within the Project site will need to be abandoned according to current water quality and safety standards. These conditions shall be included in agreements between the University of California and Eastern Municipal Water District.

Summary

Mitigation measures MM-a through MM-c all consist of regulatory compliance to regulations that are already required of the Project and thus must be implemented by law. In addition, part of MM-b applies to the formerly proposed golf course, which is no longer applicable. The well abandonment that is addressed in MM-d is no longer applicable due to the new **Mitigation Measure (MM) HAZ-3** and **MM-HAZ-4**. The City of Moreno Valley Community Development Department would be responsible for coordinating the review of the flood control and drainage plan with appropriate agencies and assuring the adequacy of compliance to applicable regulations. It would be the responsibility of the City Division of Building and Safety to verify the implementation of BMPs and maintenance measures. Thus, these measures would be vacated and not carried forward.

2005 Addendum

The following mitigation measure was added to ensure that water-related impacts would remain less than significant with the 2005 Addendum (City of Moreno Valley 2005b):

MM-15a Prior to grading, the developer shall submit improvement plans for the lakes and any related flood control improvements to the City of Moreno Valley, Riverside County Flood Control and Water Conservation District, and the California Department of Fish and Game for review and approval.

Summary

With implementation of this added mitigation, the 2005 Addendum found that the 2005 Aquabella SPA would produce fewer impacts on water resources compared to the 2003 Supplemental EIR (City of Moreno Valley 2005b). The project applicant has complied with MM-15a prior to grading activity that has occurred on site related to site preparation, as well as flood control improvements. It would continue to be applicable to the Project and therefore shall be carried forward as part of the 2024 Subsequent EIR as **MM-HYD-1**.

4.10.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

For potential impacts related to hydrology and water quality, the following additional mitigation is required.

MM-HYD-1 Lake Improvement Plans Review and Approval. (Previously MM-15a). Prior to grading, the developer shall submit improvement plans for the lakes and any related flood control improvements to the City of Moreno Valley, Riverside County Flood Control and Water Conservation District, and the California Department of Fish and Wildlife for review and approval.

MM-HYD-2 EMWD Review and Approval. Prior to the issuance of a grading permit, the Project applicant shall submit proposed groundwater extraction plans including wells to be used, pumping rates and duration, and total proposed pumping volumes for both initial filling of the lake and any subsequent annual maintenance pumping, to Eastern Municipal Water District (EMWD) for review and approval prior to commencement of any groundwater extraction activities. Any groundwater extraction from any of the existing on-site wells shall be metered and reported to EMWD in accordance with the direction given by EMWD. No pumping shall be permitted without prior approval by EMWD in accordance with the sustainability goals of the Groundwater Sustainability Plan for the West San Jacinto Groundwater Basin.

In addition, for Thresholds 1 and 5, **MM-HAZ-3** and **MM-HAZ-4** would be required (see Section 4.9).

4.10.7 Significance of Impacts after Mitigation

Threshold 1: Violate Water Quality Standards or Waste Discharge Requirements

The discontinued wells located on site would be decommissioned as outlined in **MM-HAZ-4**, which would reduce the potential for accidental releases of hazardous materials. The Scott and Coray wells have been used for groundwater level monitoring as part of development of the EMWD GSP; the Scott well (also referred to as "UCR Scott" in EMWD documents) has been identified as a "Representative Monitoring Point" in the GSP, and is currently the only well used by EMWD for groundwater level monitoring within the Moreno Valley Production Area (EMWD

2021b). Decommissioning of this well could impact future monitoring activities conducted by EMWD; **MM-HAZ-4** includes procedures for communication with EMWD to either maintain the Scott well or provide a replacement well for ongoing GSP-related monitoring.

MM-HAZ-3 would require additional groundwater characterization and treatment of groundwater to meet applicable water quality standards. With this mitigation incorporated, impacts associated with the water quality of the proposed lake would be **less than significant with mitigation.**

With the implementation of **MM-HAZ-3** and **MM-HAZ-4,** the potentially significant impact related to the degradation of surface or groundwater quality would be reduced to **less than significant with mitigation**.

Threshold 2: Substantially Decrease Groundwater Supplies or Interfere with Recharge

Implementation of **MM-HYD-2** would require coordination with EMWD and the GSA for the basin to ensure that any groundwater extraction is consistent with the goals of the GSP and sustainable management of the basin. With the implementation of **MM-HYD-2,** the potentially significant impacts related to groundwater demand would be reduced to **less than significant with mitigation**.

Threshold 3: Substantially Alter Drainage

Impacts would remain **less than significant**.

Threshold 4: Risk Release of Pollutants During Floods, Tsunamis, or Seiches

Impacts would remain **less than significant**.

Threshold 5: Conflict with or Obstruct Water Quality or Groundwater Management Plan

Implementation of **MM-HYD-1** and **MM-HYD-2** would ensure coordination with EMWD is accomplished prior to any groundwater extraction to ensure any extraction is consistent with, and will not impede, the GSP for the SJGB. In addition, implementation of the Project may also include abandonment of an existing groundwater well (referred to as the UCR Scott well) that is has been designated by EMWD as Representative Monitoring Point in the GSP. Abandonment or any other interference with this well could obstruct implementation of the GSP by removing a monitoring data point that is being used as part of the monitoring of groundwater levels in the subbasin. Implementation of **MM-HAZ-4** would ensure that coordination with EMWD is done prior to any modifications or abandonment of any wells on site. As a result, with mitigation, impacts would be considered less than significant. With the implementation of **MM-HYD-2** and **MM-HAZ-4,** the potentially significant impact related to conflict with a water quality control plan or a sustainable groundwater management plan would be reduced to **less than significant with mitigation**.

4.11 Land Use and Planning

This section of the Subsequent Environmental Impact Report (SEIR) describes the existing land use and planning conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a).

The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in significant and unavoidable land use and planning impacts related to inconsistencies with the then-current regional air quality management plan. Other land use and planning impacts were found to be less than significant (City of Moreno Valley 1999b, 2005b). Land use and planning impacts were not discussed in the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR).

The following analysis of the Project's potential impacts related to land use and planning is based on the City of Moreno Valley General Plan 2040 (2040 General Plan)[1]; the Final EIR for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan (2040 General Plan EIR); the City of Moreno Valley 2006 General Plan (2006 General Plan); the City of Moreno Valley Municipal Code; applicable Project plans, documents, and the draft Specific Plan Amendment (Amendment 2) (included as Appendix A to this SEIR); and other resources and information available to the public.

4.11.1 Existing Environmental Conditions

Project Site

The Project site is located in the northwest corner of Riverside County and in the southeastern portion of the City of Moreno Valley (City). The Project site is composed of 668.6 acres across relatively flat, undeveloped land. Approximately 437 acres, or 65% of the acres, proposed for development have been graded. The Project site is located in an urban area of the City and is surrounded by existing development.

[1] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (Sierra Club v. City of Moreno Valley, et al., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan, and describes the applicable land use and zoning designations under the 2006 General Plan.

Existing General Plan Land Use Designation

The 2040 General Plan designates the central Project site under the mixed-use designation of "Downtown Center (DC), Aquabella Specific Plan" as shown in Figure 2-3, 2040 General Plan Land Uses Surrounding Project Site. This Downtown Center designation allows for a vibrant mix of business, entertainment, residential, cultural, and civic uses to activate the Downtown Center throughout the day and into the evening. The vitality of commercial and retail development downtown is envisioned to be supported by significant new housing in and adjacent to the Downtown Center. The 2040 General Plan envisions the integration of the Aquabella area into the Downtown Center, allowing for development of supportive multifamily housing, facilities, services, hotel and associated visitor-serving uses, and shops oriented to hospital staff, patients, and their families adjacent to the existing hospital campuses. There is no density minimum, maximum, or allowable range in the Downtown Center. Instead, the Land Use & Community Character Element identifies "development potential" areas, including vacant land and underutilized properties, that "present opportunities for infill development" in the Downtown Center area (City of Moreno Valley 2021a).

The central area of the Project site has also been identified as the Downtown Center/Aquabella "concept area" in the 2040 General Plan, Map LCC-2, meaning that the site has been identified as an underutilized or vacant property that has significant development potential in an infill area or in a location that can accommodate significant new development over the next 20 years. The "concept area" label denotes areas that have the most potential to accommodate new development, but where there is an existing specific plan that may require an update to achieve the site's unbuilt development potential.

Additionally, the central Project site has been identified as a "Center" in the City's land use framework and vision (Map LCC-3). The Center designation indicates that area is planned to evolve into a vibrant, mixed-use area that acts as a major focal point in the community and offers an array of choices for living, working, shopping, and enjoying free time. The Center designation also denotes the intention to create a dynamic destination with amenities that draws local residents from Moreno Valley and visitors from the wider region. The new Downtown Center is planned as the heart of the community, envisioned as the City's premier activity center (City of Moreno Valley 2021a).

Table LCC-3 in the 2040 General Plan provides a "Downtown Center Illustrative Development Program," providing an illustration of potential residential and employment buildout in the Downtown Center (City of Moreno Valley 2021a). The Downtown Center encompasses approximately 1,200 acres, which includes the previously approved 2005 Aquabella SPA. As to residential uses, the example/illustration provided in Table LLC-3 identifies 1,320 low density residential (less than 10 dwelling units per acre [du/ac]) units and 5,524 medium/high density residential (more than 10 du/ac) units in the Downtown Center area.

The 10.0-acre parcel along the eastern boundary of the Project site proposed for Specific Plan development is designated R5 Residential under the 2040 General Plan. The R5 Residential designation allows for single-family detached housing on standard sized suburban lots, with a maximum allowable density of 5.0 du/ac, as well as school uses, pursuant to state law.

Existing Zoning Designation

The existing zoning of the central Project site is Downtown Center - Specific Plan (DC-SP), SP 218, as shown in Figure 2-4, 2040 Zoning Surrounding Project Site, indicating its zoning is Downtown Center and SP 218. The purpose of the Downtown Center zoning is to be "the primary hub and focal point of Moreno Valley and an economic and cultural engine in the region" (City of Moreno Valley 2021a). The DC Zone allows for a "mix of business, entertainment, residential, cultural, and civic uses" (City of Moreno Valley 2021a). An area plan, specific plan, or

site plan is required to demonstrate consistency with applicable principles outlined in the Land Use & Community Character Element of the 2040 General Plan within the Downtown Center zone. The Project site also has a floating Downtown Center - Planned Unit Development (DC-PUD) zoning designation, indicating a general area within which a Planned Unit Development, or PUD, could be located to designate dense housing closer to Nason Street and less dense housing on the periphery of the Downtown Center. This floating designation is not required, nor does it preclude development or uses that would otherwise be permitted within the Downtown Center, and the Specific Plan Amendment does not propose to use the 2040 General Plan's floating PUD designation. The zoning code specifically encourages residential development greater than 20 du/ac along Alessandro Boulevard and Nason Street. There is no zoning density minimum or maximum, nor are there any height limitations, in the Downtown Center.

The Project site's 10-acre parcel along the eastern boundary is zoned Residential 5 (R5). The R5 designation allows for single-family detached housing on standard sized suburban lots, with a maximum allowable density of 5.0 dwelling units per acre, as well as school uses, pursuant to Government Code 53094.

Surrounding Land Uses

The Project site's surrounding area is urbanized with a variety of residential densities, education, medical, and other uses consistent with these current designations. Specifically, the surrounding area is predominantly developed with residential uses, primarily single-family neighborhood developments, with some multifamily and mobile home uses. In among these residential neighborhoods lie commercial blocks containing grocery stores, convenient stores, and restaurants; parks and golf club uses; and La Jolla Elementary School, Landmark Middle School, Armada Elementary School, and Victoriano Elementary School.

The Riverside University Health System Medical Center, a public teaching hospital, is located along a portion of the Project site's northern boundary, and the Kaiser Permanente Hospital and medical complex is along a portion of the site's southern boundary. Moreno Valley College is directly south of the Project site. The two hospitals and college have recently expanded or have plans to expand in the near future.

Approximately 0.5 miles from the site's southern boundary is the Lake Perris State Recreation Area, which is composed of 8,800 acres including the 1,800-acre Lake Perris. This recreational area provides a myriad of recreational activities, including camping, picnicking, fishing, swimming, water sports, and boating opportunities.

Surrounding General Plan Land Use Designations

The 2040 General Plan Land Use & Community Character Element designates the area adjacent to the Project site to the north as Downtown Center (DC) and R5 Residential (R5; 5 du/ac); to the east as DC, R5, R2 Residential (R2; 2 du/ac), Public, and Open Space; to the south as R10 Residential (R10; 10 du/ac), R5, Public, and Open Space; and to the west as R5 and R10. Figure 2-3 depicts the urbanized land uses surrounding the Project site.

Surrounding Zoning Designation

The Zoning Map designates the area adjacent to the Project site to the north as Downtown Center (DC) and Residential 5 (R5); to the east as DC, Residential 5 (R5), Residential Agriculture 2 (RA2), Public Facilities, and Open Space/Park; to the south as Residential 5 (R5), Residential (SP 193 ML), Public Facilities, and

Open Space/Park; and to the west as Residential 5 (R5). Figure 2-4 shows the various urban zoning designations surrounding the Project site.

4.11.2 Regulatory Framework

Federal

There are no federal codes, policies, or regulations regarding land use and planning that would apply to the proposed Project.

State

Regional Housing Needs Assessment

The Regional Housing Needs Assessment (RHNA) is mandated by state housing law, Government Code Section 65584 et seq., as part of a periodic process of updating local housing elements in city and county general plans. The RHNA quantifies the need for housing within each jurisdiction during specified planning periods. In this area of Southern California, the RHNA is produced by the Southern California Association of Governments (SCAG) and contains a forecast of housing needs within each jurisdiction in the region for 8-year periods (see additional discussion below).

California Planning and Zoning Law

The legal framework in which California cities and counties exercise local planning and land use functions is provided in California planning and zoning law, Government Code Sections 65000 et seq. Under state planning law, each city and county is required to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning" (Government Code Section 65300). The general plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private. A general plan consists of several elements, including land use, circulation, housing, conservation, open space, noise, and safety; other elements may be included at the discretion of the jurisdiction that relate to the physical development of the county or city. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals; diagrams and maps that incorporate data and analysis; and mitigation measures.

Regional

Southern California Association of Governments Regional Housing Needs Assessment

SCAG is the nation's largest metropolitan planning organization, representing six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura), 191 cities, and more than 18 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California. The agency develops long-range regional transportation plans, including sustainable communities' strategy and growth-forecast components, regional transportation improvement programs, regional housing needs allocations, and a portion of the south coast air quality management plans (SCAG 2020).

As discussed above, the RHNA is mandated by state housing law as part of a periodic process of updating local housing elements in city and county general plans. The RHNA is produced by SCAG and contains a forecast of housing needs

within each jurisdiction in the SCAG region for 8-year periods. The adopted 6th Cycle RHNA Allocation Plan was approved on March 22, 2021, and covers the planning period between October 2021 through October 2029. The 6th Cycle identified a need for 1,341,827 additional housing units within the SCAG region (SCAG 2021).

Based on a methodology that weighs a number of factors (e.g., projected population growth, employment, commute patterns, and available sites), SCAG determined the quantifiable needs for dwelling units in each jurisdiction within the region according to various income categories. Once the RHNA allocation to each jurisdiction is established, local jurisdictions decide how to address their housing needs through the process of updating general plan housing elements (SCAG 2020).

Of the SCAG regional allocation, 13,327 dwelling units have been assigned to the City and 167,351 dwelling units have been assigned to the County of Riverside (County) (SCAG 2021). The City's projected housing need from 2021 to 2029 consists of the following:

- 3,779 very-low-income units (0%–50% of area median income)
- 2,051 low-income units (51%–80% of area median income)
- 2,165 moderate-income units (81%–120% of area median income)
- 5,631 above-moderate-income units (more than 120% of area median income)

Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) assists in the development of long-range regional plans and strategies that provide efficient movement of people, goods, and information; enhance economic growth and international trade; and improve the environment and quality of life, which must lay out a plan to meet the region's transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. As part of the RTP/SCS document, SCAG develops population and housing forecasts for the SCAG region and for the jurisdictions that make up the SCAG region. SCAG's 2016-2040 RTP/SCS Growth Forecasts were relied upon by the City in adopting the 2040 General Plan and current Housing Element (SCAG 2016; City of Moreno Valley 2021a, 2021b).

SCAG's adopted its current 2020–2045 RTP/SCS, entitled "Connect SoCal," in 2020, which provides the long-range vision of the SCAG region. The RTP/SCS expands land use and transportation strategies established from previous cycles to increase mobility options and achieve a more sustainable growth pattern. The RTP/SCS contains plans and projections for the region's future, from 2020 through the horizon year of 2045. Like other RTP/SCS publications, Connect SoCal provides a policy framework for preparing local plans and handling issues of regional significance, such as land use and housing, open space and biological habitats, water, energy, air quality, solid waste, transportation, security and emergency preparedness, economy, and education. The plan also strives to achieve broader regional objectives such as encouraging diverse housing construction in areas supported by multiple transportation options; promoting development of complete streets that prioritize safe opportunities to walk, bike, and pursue other forms of active transportation; leveraging new transportation technologies and data-driven solution to make travel more efficient; and promoting conservation of natural lands. The RTP/SCS advances regional planning by incorporating an integrated approach between SCAG, state and local governments, transportation commissions, resources agencies and conservation groups, the private sector, and the general public.

The RTP/SCS is updated every 4 years. SCAG has recently released its draft 2024–2050 RTP/SCS, also referred to as "Connect SoCal 2024." However, Connect SoCal 2024 has not been adopted or approved at this time. The California Environmental Quality Act (CEQA) does not require consideration of draft plans not adopted or approved at the time of the EIR (*South of Market Community Action Network v. City and County of San Francisco* [2019] 33 Cal.App.5th 321, 353; *Chaparral Greens v. City of Chula Vista* [1996] 50 Cal.App.4th 1134, 1145, fn. 7.). The applicant has requested that the Project be considered in SCAG's preparation of Connect SoCal 2024. Should Connect SoCal 2024 be adopted prior to certification of this SEIR, the Final SEIR will be appropriately updated.

March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan

The Airport Land Use Compatibility Plan was adopted by the Riverside County Airport Land Use Commission in 2014. It provides polices to ensure compatibility between the March Air Reserve Base/Inland Port Airport and surrounding land uses. The Project site is within the Federal Aviation Administration (FAA) Part 77 Military Outer Horizontal Surface Limits Zone, meaning it may trigger necessary FAA notification to ensure that proposed structures do not affect navigable airspace if such structures exceed 200 feet above ground level or may otherwise impact the safety of navigable airspace. The Project is not anticipated to require FAA Part 77 notification. (Mead & Hunt. 2014)

Western Riverside County Multiple Species Habitat Conservation Plan

The Multiple Species Habitat Conservation Plan (MSHCP) is a long-term regional conservation plan established to protect sensitive species and habitats in western Riverside County. The MSHCP Plan Area provides a regional vision for balanced growth by complying with federal and state endangered species laws.

Local

City of Moreno Valley General Plan

The State of California requires that each city prepare and adopt an approved general plan that provides comprehensive, long-term guidance for the city's future. The 2040 General Plan was adopted June 15, 2021. This update to the general plan expanded upon and enhanced the 2006 General Plan for the City.[2]

The 2040 General Plan is the blueprint that guides the physical development in Moreno Valley over the next 20 years. The 2040 General Plan contains 10 elements: Housing, Land Use & Community Character, Economic Development, Circulation, Parks and Public Services, Safety, Noise, Environmental Justice, Healthy Community, and Open Space and Resource Conservation. Each of the 2040 General Plan elements contains related goals and policies.

Housing

The Housing Element provides a framework for current and future housing needs within the City. The element describes the population, employment, and housing within the City; how it is projected to change; and how City housing needs may be met.

[2] As described above, a consistency analysis with the 2006 General Plan is also included in the Specific Plan Amendment (Appendix A to this SEIR). If the 2006 General Plan is operative at the time of approval, the Project would require a GPA to amend the 2006 General Plan and Land Use Map, Figure 2-2 to accommodate the Project.

Land Use & Community Character

The Land Use & Community Character Element describes the existing land use pattern within the City and provides a flexible framework to guide development and conservation in the coming years. The element includes standards for density, intensity and goals, policies, and actions related to urban design, community character, and placemaking to guide City planning.

Economic Development

The purpose of the Economic Development Element is to lay out a framework under the 2040 General Plan that will guide bold economic development, education, and training initiatives and position Moreno Valley as the leading hub of business and industry in the Inland Empire. The Economic Development Element provides an economic profile of the City including projected employment, economic assets, and market opportunities within the City. This element also includes goals and policies related to diversification and growth, local business support, community profile and competitive position, and workforce development.

Circulation

The Circulation Element provides circulation diagrams identifying major thoroughfares; transportation routes for vehicles, transit, bicycles, and pedestrians; and a military airport in the City. This element includes goals and policies related to complete streets, regional transportation network, planned improvements, and efficient circulation.

Parks and Public Services

The Parks and Public Services Element describes the existing public facilities and public services within the City. This element includes goals and policies related to the City's multi-use trail system, recreation and culture, public safety (fire, police and emergency response), and public utility infrastructure.

Safety

The Safety Element identifies and addresses hazards within the City such as wildfires, flooding, seismic events, landslides, dam inundation, and climate change. This element includes policies related to protection from hazards, emergency response, community resilience, and airport hazards.

Noise

The Noise Element describes the existing noise sources and levels within the City and establishes acceptable noise levels for given land uses. This element includes policies related to providing a healthy noise environment and addressing noise concerns.

Environmental Justice

The Environmental Justice Element provides a community health profile and identifies disadvantaged communities within the City. This element includes policies related to reducing pollution exposure, providing access to sanitary housing and food, and encouraging community engagement.

Healthy Community

The Healthy Community Element provides for planning and promoting public health and well-being. This element includes policies related to promoting health and well-being, engaging the community, and promoting businesses that support community health.

Open Space and Resource Considerations

The Open Space and Resource Considerations Element describes the existing open space and the conservation and preservation of resources in and around the City. This element includes goals and policies related to protection of natural resources, preserving cultural and scenic resources, water and energy efficiency, and waste reduction.

Moreno Valley Zoning Ordinance

The provisions of Title 9 of the Moreno Valley Municipal Code are referred to as the Zoning Ordinance. The Zoning Ordinance is based on the official Zoning Map of the City. The purpose of the Zoning Ordinance is to protect and promote the public health, safety, comfort, convenience, and general welfare of the Moreno Valley community; to implement the policies of the 2040 General Plan; and to protect physical, environmental, and economic uses within the City to ensure orderly development, reduce hazards to the public, and attain the advantaged resulting from orderly planned use of land resources.

This document further outlines the City's guidelines and requirements for developments for each zoning type. Development standards ensure that new uses and development will contribute to and be harmonious with existing and potential development in the surrounding area, as well as further the goals, objectives, policies, and implementation programs of the 2040 General Plan. Development standards for the Downtown Center zone are provided in Section 9.07.010, Mixed Use Zones/Corridors, subsection B, Downtown Center (DC).

2005 Aquabella Specific Plan Amendment

In 1999, the City approved the original SP 218 authorizing the construction and operation of a 2,922 dwelling unit single-family and multifamily residential development, 148.7-acre golf course, 24.1 acres of retail/commercial uses, 81.7-acre school and recreational complex, 25.9-acre community park, and related drainage and infrastructure improvements in the Specific Plan Area.

In 2005, the Specific Plan was amended (2005 Aquabella SPA), which authorized the development of approximately 2,922 homes, of which 2,702 would be age-restricted; 40 acres of lakes (in-lieu of the golf course); a 300-room hotel; 25 acres of commercial uses; open space; recreation; public facilities and services; infrastructure and utility improvements; and other amenities on an 673.2-acre site. The 2005 Aquabella SPA envisioned a diverse residential community; recreational lakes, parks, and trails; and a commercial component that would reduce vehicle trips and meet community convenience and visitor-serving needs.

4.11.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to land use and planning are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to land use and planning would occur if the Project would:

1. Physically divide an established community.
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.11.4 Impact Analysis

4.11.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR evaluated the land use and planning impacts that would result from the proposed land use conversion of the original SP 218 from primarily vacant, agricultural land to urban uses. The 1999 EIR found that the original SP 218 would be similar to the existing and proposed uses for the surrounding area. Further, while the original SP 218 would increase the intensity of development compared to the maximum development conditions described in the 1988 General Plan, the Specific Plan Area was identified in the 1988 General Plan as being a Current Urban Development Area. Thus, the 1999 EIR found that despite the increased intensity of the development compared to the planned conditions, the development of the agricultural land within the Specific Plan Area was forecasted by the City in the 1988 General Plan and would not result in incompatible land use development. These impacts were less than significant.

The original SP 218 was found to be generally inconsistent with the land use designations at the site, which provided 485 acres designated for Agriculture and 275 acres for Planned Development. However, the 1999 EIR found that once the Specific Plan was adopted, the original SP 218 would be consistent with the land use objectives and policies of the City, such that impacts would be less than significant.

Evaluating the original SP 218's consistency with regional plans and policies from SCAG and the Riverside County Habitat Conservation Agency, the 1999 EIR found that it would increase the number of housing units beyond what was allowed in the 1988 General Plan. However, the area surrounding the Specific Plan Area would provide sufficient employment opportunities to accommodate the residents introduced by the original SP 218 and would have little impact on job formation in the area, such that impacts related to consistency with SCAG policies would be less than significant. Further, it was determined that the project would be consistent with the Riverside County Habitat Conservation Agency with the payment of fees and consultation with the agency; therefore, impacts would be less than significant.

Finally, the 1999 EIR found that the original SP 218's lack of conformance with land use assumptions of the regional growth management strategy or air quality management plan would result in a potentially significant impacts related to consistency with these regional plans (City of Moreno Valley 1999b).

Mitigation

No mitigation was identified. Mitigation was determined to be infeasible to implement at the project level. Impacts were found to be significant and unavoidable.

2003 Supplemental EIR

Analysis

Land use and planning impacts were not evaluated in the 2003 Supplemental EIR.

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

Compared to the original SP 218, the 2005 Addendum discussed that, while the 2005 Aquabella SPA would require a General Plan Amendment, the number of units would remain the same as what was proposed in the original SP 218. The 2005 Addendum did not identify any significant changes in impacts related to land use and planning (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was identified.

4.11.4.2 Project Impact Analysis

Threshold 1: Would the Project physically divide an established community?

The Project would have a significant environmental impact if it were developed in such a way that it created a physical barrier to or within an established community, such as the creation of a highway or utility corridor through an existing community that would restrict travel and not promote connections through a bisected area.

The Project site is located on an infill site in an urbanized area in the southwestern portion of the City. The site has long been designated for urban development and is currently designated for development by a 2040 General Plan designation of Downtown Center (DC) - Aquabella Specific Plan and corresponding zoning of Downtown Center - SP 218. The majority of the site has been previously graded, with the fully developed Nason Street traversing through the site from north to south. The Project site is surrounded by various existing residential uses, along with educational and medical development. The Project would not physically divide any established residential community.

The Project would introduce up to 15,000 multifamily housing units to the Project site, of which 2,922 residential dwelling units were previously approved under the 2005 Aquabella SPA and original SP 218. Other land uses and acreages (commercial, hotel, lakes) would be similar to the prior approvals. While the Project would represent an increase in the total number of residential units within the Project site, the development would be at the same site

as the prior approvals and consistent with the current types of uses allowed on the Project site (Residential and Downtown Center). Because the surrounding areas consist primarily of residential uses and community-supporting commercial and institutional development (grocery stores, restaurants, schools, and hospitals), the proposed multifamily residential uses would be consistent with the surrounding community. Additionally, the proposed 80 acres of parks (40-acre lake system, 15-acre lake promenade, and 25 acres of additional parks) would represent community-supporting amenities, which would be consistent with the surrounding uses in the community.

Further, the Project would include pedestrian, bicycle, transit, and vehicle circulation that would connect the Project site to the surrounding area, including through the existing roadways including Nason Street and Cactus Avenue. Specific internal roadway alignments and access points would be determined during the development of the Project and would be consistent with the traffic study prepared for the Project (Appendix K3). Trails, sidewalks, and pedestrian bridges would improve the quality of pedestrian and bicycle access between used within and adjacent to the Project site, improving community cohesiveness and connections. Therefore, the Project would have a **less than significant impact** related to physically dividing an established community.

Threshold 2: Would the Project cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

A significant impact to the environment would occur if the Project directly conflicted with a policy intended to protect the environment or the population or indirectly resulted in a change to the environment, now or in the future, that would conflict with an existing policy and consequently result in environmental impacts. The following discussion address the Project's compatibility with applicable land use plans, policies, and regulations. Plans, policies, and regulations analyzed below include the 2040 General Plan, the Moreno Valley Municipal and Zoning Code, the RTP/SCS (Connect SoCal), MSHCP, and the Airport Land Use Compatibility Plan.

2040 General Plan

As discussed above, the 2040 General Plan Land Use & Community Character Element designates the central Project site as Downtown Center (DC), Aquabella Specific Plan. This Downtown Center designation allows for a vibrant mix of business, entertainment, residential, cultural, and civic uses to activate the Downtown Center throughout the day and into the evening. The vitality of commercial and retail development downtown is envisioned to be supported by significant new housing in and adjacent to the City's Downtown Center. The 2040 General Plan envisions the integration of the Aquabella area into the Downtown Center, allowing for development of supportive multifamily housing, facilities, services, hotel and associated visitor-serving uses, and shops oriented to hospital staff, patients, and their families adjacent to the existing hospital campuses.

The 2040 General Plan Land Use & Community Character Element does not contain or require any minimum or maximum allowable residential density in the Downtown Center (which includes the Project site), nor does it set residential density ranges or other limitations. Instead, the element identifies "development potential" areas, including vacant land and underutilized properties, that present opportunities for infill development (see Map LCC-2, Concept Areas and Major Specific Plans, in City of Moreno Valley 2021a). These development potential areas are intended to, among other things, assist the City in achieving its jobs-housing balance, which means that more Moreno Valley residents will be able to work locally, cutting down commute times and allowing people to spend more time with family and friends. The Project would be consistent with these goals (see Table LCC-1 in City of Moreno Valley 2021a). The Project development approvals include a General Plan Amendment to update Table LCC-1, Development Potential and Jobs-Housing Balance, in the 2040 General Plan (City of Moreno Valley 2021a).

Additionally, proposed projects in the Downtown Center must demonstrate consistency with Table LCC-2, Downtown Center Development Principles, in the 2040 General Plan (City of Moreno Valley 2021a). As shown in Table 4.11-1, the Project is consistent with the land use and urban design, circulation, and parks and open space development principles.

Table LCC-3 in the 2040 General Plan (City of Moreno Valley 2021a) provides a "Downtown Center Illustrative Development Program," providing an illustration of potential residential and employment buildout in the Downtown Center. The Downtown Center encompasses approximately 1,200 acres, which includes the previously approved more-than-700-acre 2005 Aquabella SPA. Regarding residential uses, the example/illustration provided in Table LLC-3 identifies 1,320 low density residential (less than 10 du/ac) units and 5,524 medium/high density residential (more than 10 du/ac) units. The Project provides for a greater number of residential units. The Project's General Plan Amendment would update Table LCC-3 to include the residences proposed by the Specific Plan Amendment.

The 10.0-acre parcel along the eastern boundary of the Project site is currently designated R5 Residential under the 2040 General Plan. In the General Plan Amendment, this is proposed to be changed to Downtown Center (Aquabella Specific Plan). The concurrently processed General Plan Amendment would also include textual changes to the Housing Element to incorporate the Project's housing density and redesignation of the 10-acre parcel. With future approval and adoption of the General Plan Amendment, the Project would not conflict with the City's General Plan with regard to allowable land uses and consistent consideration of site residential density/development.

A consistency analysis with the City's 2040 General Plan goals and policies is included in Table 4.11-1 to address potential conflicts between the Project and applicable goals and policies.

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
Land Use & Community Character Element	
Goal LCC-1: Establish an identifiable city structure and a flexible land use framework that accommodates growth and development over the planning horizon.	**Consistent.** The Project would add an additional 12,078 multifamily residences to a flexible land use plan to accommodate regional and City housing needs. The additional units would be a part of the development of up to 15,000 multifamily residences, 25 acres of supporting commercial and retail uses, a 300-room hotel, 80 acres of parks (comprising the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks), and 40 acres of elementary school and middle school uses. The Project responds to the substantial demand for workforce, education, and other multifamily housing options that would be in proximity to the planned development of a central Town Center for recreation, shopping, and entertainment.
Policy LCC.1-1: Foster a balanced mix of employment, housing, educational, entertainment, and recreational uses throughout the city to support a complete community.	**Consistent.** The Project would provide an additional 12,078 multifamily residences to the previously approved 2005 Aquabella SPA, which would provide a balanced mix of uses to support a complete community. Housing needs would be met by the

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
	approximately 12,078 multifamily residences. The homes provided by the proposed Project would provide housing that would support nearby job centers, including the World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, UCR, Moreno Valley College, and regional and local shopping and commercial centers. Job opportunities would also be created on site within the 24 acres of commercial and retail uses and within the elementary and middle school uses. Elementary and middle school educational needs would be met through the proposed Project's provision of 40 acres of elementary school and middle school uses. The Project's central Town Center area would provide opportunities for recreation, shopping, lodging, and entertainment. The Project would provide 80 additional acres of parks, composed of the previously approved 40 acres of lakes, a 15-acre lake promenade feature, and 25 acres of other additional parks. Project residents would be able to take advantage of the myriad nearby recreational activities, including the Lake Perris State Recreation Area, which provides many recreational activities, including camping, picnicking, fishing, swimming, water sports, and boating. The proposed Project balances uses on site and in the area to support a complete community.
Policy LCC.1-2: Expand employment opportunities locally and provide sufficient lands for commercial, industrial, residential and public/quasi-public uses while ensuring that a high quality of life is maintained in Moreno Valley.	**Consistent.** The Project would expand employment opportunities locally on and off site. On site, job opportunities would also be created within the 25 acres of commercial, retail, and hotel uses as part of the Project. The elementary and middle school uses would also provide employment opportunities. The Project would also expand employment opportunities locally by providing housing to support the local workforce, including at nearby job centers such as the World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, UCR, Moreno Valley College, and regional and local shopping and commercial centers. The Project would provide an additional 12,078multifamily residences to the previously approved 2005 Aquabella SPA for the proposed creation of an innovative urban village and Town Center with 15,000 multifamily housing options for all ages and income levels and 25 acres of commercial uses. The proposed Project would be a component of

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	a high quality and vibrant Downtown Center development that balances land uses and allows for a vibrant mix of business, entertainment, cultural, civic, and residential uses. The Project would maximize opportunities at a property long designated for mixed commercial and residential mixed uses without impeding opportunities on other land in the City.
Policy LCC.1-4: Focus new development in centers and corridors so as to support the vitality of existing businesses, optimize the use of utility infrastructure, and reduce vehicle trip frequency, length, and associated emissions.	**Consistent.** The 2040 General Plan designates the Project site as Downtown Center (DC), Aquabella Specific Plan, and R5; however, as described above, the Project would include a GPA to designate the entire site as DC. This Downtown Center designation plans for a vibrant mix of business, entertainment, residential, cultural, and civic uses to activate the Downtown Center throughout the day and into the evening. The vitality of commercial and retail development downtown is envisioned to be supported by significant new housing in and adjacent to the Downtown Center. The 2040 General Plan envisions the integration of the Project site into the Downtown Center, allowing for development of supportive multifamily housing, facilities, services, hotel and associated visitor-serving uses, and shops oriented to hospital staff, patients, and their families adjacent to the existing hospital campuses. The Project is located along a primary circulation spine road (Nason Street) that has already been completed. Similarly, master drainage and master flood control improvements have already been completed. The Project would optimize the use of this existing infrastructure. The Project site is located in an area with an average VMT below that of the City and the region. The proposed Project would provide a walkable and bikeable community proximate to major area job centers, including World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, UCR, Moreno Valley College, and regional and local shopping and commercial centers. An efficient transportation network is a central tenet of the proposed Project, which would provide a tram connection to job centers, enhanced transit, pedestrian and bicycle routes, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures.

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Policy LCC.1-5: Encourage mixed use development in either a vertical or horizontal configuration in the Downtown Center, the Moreno Valley Mall/Towngate Center area, and at key intersections along major transit routes.	**Consistent.** The Project site is located in the area designated Downtown Center (DC) and R5 in the 2040 General Plan; however, as described above, the Project would include a GPA to designate the entire site as DC. The Project would provide an additional 12,078 multifamily residences to the previously approved 2005 Aquabella SPA (up to 15,000 total residences) and provide for 25 acres of supporting commercial and retail uses, 80 acres of parks (the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks), and 40 acres of elementary school and middle school uses. The Project site is located along major transit routes. The RTA provides existing bus routes proximate to the site. Route 31 runs along Nason Street to the Riverside University Medical Center. Route 20 also serves the site along Alessandro, Nason, and Moreno Beach Dr. to Riverside University Medical Center, Kaiser Permanente Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across I-215. The proposed Project would also provide a tram connection to job centers, enhanced transit, pedestrian and bicycle routes, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures.
Policy LCC.1-7: Support the continued buildout of residential areas as needed to meet the community's housing needs.	**Consistent.** The Project site has been designated for residential mixed-use development since approval of the original SP 218 in 1999. The Project would provide an additional 12,078multifamily residences to the previously approved 2005 Aquabella SPA for a total of 15,000 multifamily homes to support the community's housing needs related to workforce, education, medical, and other multifamily housing needs. The Project would assist the City in meeting its 6th Cycle RHNA allocation of 13,627 units.
Actions LCC.1-A: Use development agreements, impact fees, benefit districts and other mechanisms to ensure the provision of adequate infrastructure to serve new development	**Consistent.** The Project would be conditioned to pay such appropriate impact fees as determined by the City's impact fee schedule and other laws to ensure the provision of adequate infrastructure to serve the development proposed by the Project. Chapter 7 of the Specific Plan Amendment (Appendix A) addresses the various mechanisms and funding opportunities that may be used to ensure adequate infrastructure is

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	provided concurrent with site buildout. A development agreement may further address these issues.
Policy LCC.1-8: Promote a land and resource efficient development pattern in order to support efficient delivery of public services and infrastructure, conserve open space lands surrounding the city, reduce vehicle trip lengths and improve air quality.	Consistent. The Project site is located in the area designated Downtown Center (DC) and R5 in the 2040 General Plan; however, as described above, the Project would include a GPA to designate the entire site as DC. The Project would focus development within the City's Downtown Center along corridors, walkways, key gateway entry points, and complementary connections to adjacent and proximate uses. The Project would provide an additional 12,078 multifamily residences to the previously approved 2005 Aquabella SPA, which would include up to 15,000 multifamily residences with 25 acres of supporting commercial and retail uses, 80 acres of parks (the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks), and 40 acres of elementary school and middle school uses to promote an efficient land use pattern and reduce vehicle trip lengths. The Project would maximize the residential component of this mixed-use designated site in the City's Downtown Center for housing, jobs, recreation, and public facilities; the Project would discourage sprawl into open space areas surrounding the City. The Project site is located along major transit routes and would support frequent and reliable transit service and other multimodel transportation measures, including walking and biking. The RTA provides existing bus routes proximate to the site. Route 31 runs along Nason Street to the Riverside University Medical Center. Route 20 also serves the site along Alessandro, Nason, and Moreno Beach Dr to Riverside University Medical Center, Kaiser Permanente Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across I-215. Trams would connect the Project's Town Center and residential neighborhoods with Riverside University Health System Medical Center, Kaiser Permanente Hospital, World Logistics Center, and the Moreno Valley March Field Train/Metrolink Station, which would significantly minimize the need for single-occupancy vehicle travel and improve air quality. The Project would also provide enhanced

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	transit, pedestrian and bicycle routes, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures. Vehicle trip lengths would also be reduced through development proximate to major job centers in the City and region (e.g., Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, and the World Logistics Center).
Policy LCC.1-11: Require that new development be compatible with the standards for land uses, density and intensity specified in the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan.	**Consistent.** The Project site is located outside the influence area for March Air Reserve Base/Inland Port Airport and therefore the compatibility criteria of the March ALUCP do not apply.
Policy LCC.1-12: Balance levels of employment and housing within the community to provide more opportunities for Moreno Valley residents to work locally, cut commute times, and improve air quality.	**Consistent**. The Project would support the demand for workforce, education, and other multifamily housing by providing an additional 12,078multifamily residences proximate to major job centers in the City and region (e.g., Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, and the World Logistics Center). This would allow residents to live and work locally, cutting commute times and improving air quality. The Project would include 25 acres of commercial uses and educational/school facilities, which would further balance levels of employment and housing within the community by providing approximately 2,500 jobs where workers may also reside within the Project. Available workforce housing may have the added benefit of attracting other businesses to the City, further reducing long commutes and achieving a better balance of jobs to housing. Additionally, through the implementation of PDF-TRANS-1, the Project would include community-based travel planning, which would educate residents about transportation options available to them.
Goal LLC-2: Foster Vibrant gathering place for Moreno Valley residents and visitors.	**Consistent.** The Project would provide an additional 12,078 multifamily residences to the previously approved 2005 Aquabella SPA. The design of the Project focuses on creating a premier urban village and Downtown Center, including a cutting-edge Town Center interfacing and connecting with existing, adjacent health care facilities; designing to include prominent landmarks, monumentation, and gathering places throughout the urban pedestrian trail fabric; use of an integrated lake, lake promenade, parks, and school features; and implementing a pedestrian-friendly, bicycle, and multi-use trail network to provide welcoming and vibrant gathering

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	places for the City's residents and visitors. The sustainable mixed-use neighborhood would provide places for people to live, work, recreate, and shop—all linked to the lakes, lake promenade, parks, schools, trails, and adjacent and proximate major job centers. High-quality restaurants, and retail offerings would support a vibrant economic and social core within the Project's commercial center. The Project would provide a social gathering place for the region, creating moments and experiences not found anywhere else.
Policy LCC.2-1: Create a Downtown Center with a vibrant mix of uses that will serve as the primary hub and focal point of Moreno Valley economic and cultural engine in the region.	**Consistent.** The design of the Project in the City's Downtown Center area focuses on creating a hub and focal point of Moreno Valley in the region. The cutting-edge Town Center adjacent health care facilities; design to include prominent landmarks, monumentation, and gathering places; incorporation of a recreational lake, lake promenade, parks, and schools features; and implementation of a pedestrian-friendly, bicycle, and multi-use trails network provide a welcoming and vibrant gathering places for the City's residents and visitors. The sustainable mixed-use neighborhood would provide places for people to live, work, recreate, and shop—all linked to the lakes, lake promenade, parks, schools, trails, and adjacent and proximate major job centers. High-quality restaurants and retail offerings would support a vibrant economic and social core within the Project's commercial center. Streetscape design would create a pedestrian and multimodal experience within the Project site. The 300-room hotel would provide lodging for visitors to the City. The Project would provide a social gathering place for the region, creating moments and experiences not found anywhere else.
Policy LCC.2-2: Require that proposed projects in the Downtown Center prepare an area plan demonstrating consistency with the principles outlined in Table LCC-2 and the illustrative development program shown in Table LCC-3 prior to approval. Development on smaller parcels may satisfy this requirement with a site plan.	**Inconsistent/Consistent with GPA.** The Project would include a GPA to designate the entire site as Downtown Center, Aquabella Specific Plan. The Aquabella Specific Plan Amendment serves as an area plan under the Moreno Valley Municipal Code, Section 9.07.010(B)(3), which provides that for a large project in the Downtown Center district, an existing or proposed specific plan may be used in lieu of an area plan. The Specific Plan Amendment demonstrates consistency with Table LLC-2, Downtown Center Development Principles, in the 2040 General Plan, as described in Chapter 6 of Specific Plan Amendment (Appendix A). Table LCC-3, Downtown Center Illustrative Development Program, in the 2040 General Plan provides a "Downtown Center Illustrative Development

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	Program," providing an illustration of potential residential and employment buildout in the Downtown Center. The Downtown Center encompasses approximately 1,200 acres, which includes the previously approved more-than-700-acre 2005 Aquabella SPA. Regarding residential uses, the example/illustration provided in Table LLC-3 identifies 1,320 low density residential (less than 10 du/ac) units and 5,524 medium/high density residential (more than 10 du/ac) units. The Project provides for a greater number of residential units—15,000 dwelling units at the Project site. The Project's GPA would concurrently update Table LCC-3 to include the residences proposed by the Specific Plan Amendment. Upon adoption of the GPA, the Project would be consistent with Table LCC-3, as described in Chapter 6 of the Specific Plan Amendment (Appendix A).
Policy LCC.2-3: Within the Downtown Center, ensure the high intensity of development is concentrated so as to create a central core with a mix of uses to activate it throughout the day and evening and to promote strong connectivity between new uses and RUMC, Aquabella, and the Kaiser hospital campus.	**Consistent.** The Project provides for higher intensity residential development within the Project site's mixed use development concentrated around the urban village and Downtown Center. The cutting-edge Downtown Center and hotel would be located proximate to the Riverside University Health System Medical Center and Kaiser hospital campus, creating a centralized and accessible core. High-quality restaurants and retail offerings, together with civic, cultural, and/or entertainment events, would activate this Town Center throughout the day and into the evening. The integrated lake, lake promenade, parks, multi-use trails network, and school features promote a walkable, bikeable, and active environment for residents, visitors, and workers to enjoy. The human-scale design, parks, lakes, and trails strengthen the connectivity between the Project and adjacent uses, integrating into the rhythm of daily activity in the area.
Policy LCC.2-4: Leverage the presence of the hospitals and large tracts of vacant land to attract new higher-wage employers to the Downtown Center.	**Consistent.** The Project would attract higher-wage employers to the City by promoting adequate workforce housing proximate to major job centers in the City and region (e.g., Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, and the World Logistics Center). The Downtown Center would act as a new, attractive social core for the area, building a sense of place and providing visitor-serving uses. The proximity of residential multifamily homes to higher-education facilities including UCR and Moreno Valley College would also help to attract higher-wage employers to the City and surrounding area.

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Policy LCC.2-5: Integrate new employment-oriented uses into the fabric of the Downtown Center as employment, educational, corporate, and research campuses and/or as part of mixed- use developments.	Consistent. The Project would provide a number of jobs and support existing and planned job growth within the City and region. The Project's proposed 25 acres of commercial/retail, 300-room hotel, and educational uses are anticipated to create 2,500 new jobs in the City. The Project would be supportive of the surrounding medical and educational facilities and provide a place where workers can live, recreate, and shop. Creating this proposed mixed-use hub of multifamily residential development, economic, and cultural uses proximate to major job and educational centers (e.g., Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, UCR, and the World Logistics Center) would help integrate the City's Downtown Center with the nearby employment, educational, corporate, and research campuses and create destination and focal points for the region.
LCC.2-6: Create a Central Park facility to serve as a defining feature of the Downtown Center.	Consistent. The planned 80 acres of park features would be provided as part of the Project, including the previously approved 40-acre lake system acting as a "central park" facility, a 15-acre lake promenade feature, and 25 acres of other additional parks. The lake and lake promenade would provide a centralized area for public recreation and entertainment with family-friendly amenities, while also providing pedestrian and bicycle connectivity to the hospitals and residential areas.
LCC.2-7: Recognize recreation and entertainment as key contributors to the vitality of the Downtown Center and accommodate a world class sports/recreational facility to provide activities and entertainment for Moreno Valley residents.	Consistent. The 80 acres of park features would be provided as part of the Project, including the previously approved 40-acre lake system, a 15-acre lake promenade feature, and 25 acres of other additional parks. The parks, trails, and open space features would be walkable and bikeable and serve as gathering places for the community. It is further intended that the lake system may be used for water sports, such as swimming, paddleboarding, kayaking, and canoeing.
LCC.2-8: Transform Nason Street and Alessandro Boulevard into grand boulevards with a distinctive, inviting character that announces arrival in Downtown Moreno Valley.	Consistent. Located along Nason Street and Cactus Avenue, the Project would provide key visual gateway entry points from these streets that create a sense of arrival within the Downtown Center area of the City and Project. Nason Street was previously widened to its intended four lanes adjacent to the Project site, with landscaped center medians as contemplated by the prior 2005 Aquabella SPA. The proposed Project would visually complete the transformation of Nason Street into a distinctive, grand boulevard by implementing entry monumentation to announce arrival into the downtown area and installing

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	landscaping with an inviting plant palette, hardscaping, bikeways, and multi-use meandering sidewalks and trails adjacent to this roadway.
LCC.2-9: Support the vitality of commercial and retail development downtown with significant new housing in and adjacent to the Downtown Center.	Consistent. The Project would provide an additional 12,078 multifamily residences to the previously approved 2005 Aquabella SPA to support the community's housing needs related to workforce, education, medical, and other multifamily housing needs. The Project's provision of multifamily housing proximate to the World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, UCR, Moreno Valley College, and regional and local shopping and commercial centers would support the vitality of these existing commercial, retail, industrial, medical, and educational employers. The Project would assist the City in meeting its 6th Cycle RHNA allocation. By appropriately balancing the demand for homes with locally and regionally serving commercial/retail mixes uses, the Project would support the vitality of existing businesses.
LCC.2-10: Create an attractive, safe environment for bicycles and pedestrians that promotes "micro-mobility" and connectivity within the Downtown Center as well as encourage electric and autonomous vehicles.	Consistent. The design of the Project integrates complementary architecture, lighting, and landscaping in a manner that contributes to the character of the City's Downtown Center and fosters public safety. The size and scale of the Project plans for an integrated, connected Town Center and residential neighborhoods intended to maximize walkability and encourage day-to-day interaction between the mix of complementary land uses—all as part of an efficient transportation network in central Moreno Valley that incorporates automobile travel, tram, transit, pedestrian and bicycle routes, and other multimodal transportation programs and technologies that would move residents efficiently to and from major job centers. The Project fosters biking and pedestrian uses through extensive parks, multi-use trails, sidewalks, shared roads, the lake promenade and open space features, which would be designed to provide safe walking and biking options. The Project would also provide a tram to nearby job centers, enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures. EVs and autonomous vehicles would be further encouraged by EV charging stations integrated throughout the community.
LCC.2-11: Allow for the evolution of the Downtown Center and encourage site planning that facilitates	Consistent. The Project provides a comprehensive plan and vision for the implementation of the Project site

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redevelopment of sites within the core of the area in the future as land values increase and higher development intensities become more financially feasible.	that allows for flexibility in implementation, as the Project is developed in phases. The Project would provide 12,078 additional multifamily residences to the City's Downtown Center, which would support future planned development in the broader downtown area.
Action LCC.2-B: Prioritize the completion of catalyst projects for the Downtown Center, including the Town Center development at Nason and Alessandro and the Aquabella Specific Plan.	**Consistent.** The Project would add 12,078 multifamily residences to the 2005 Aquabella SPA as a catalyst project in the Downtown Center. Like the previously approved 2005 Aquabella SPA, the Project maintains the lakes, the lake promenade, parks, trails, and commercial uses; in addition, the Project would add 12,078 multifamily residences to better meet the present and future housing needs of the City and region.
Policy LCC.2-21: Orient residential uses to the street and discourage the use of walls and fences. Employ a variety of techniques to buffer residential uses on the corridors from traffic and noise, including setbacks, landscaping, stoops, and raised entries.	**Consistent.** To activate the Project streetscape and create visual interest, residential uses would be oriented to the street. As set forth in Chapter 6 of the Specific Plan Amendment (Appendix A), visual interest and buffering techniques would include sidewalks and walkways setback from the street, landscaping and trees, stoops, clearly defined entries, outdoor seating areas, and hardscaping, as well as artwork and water features incorporated in the mixed-use Town Center. Accent walls, low patio walls, and seat walls may be incorporated into the residential uses and streetscape as design elements and to enclose patio seating. Walls may also be used for monumentation; to screen parking, service, refuse, and storage areas; and to screen mechanical and utility equipment. Where screen walls are used, they would incorporate decorative elements and planting areas.
Policy LCC.2-22: Encourage new mixed-use and commercial development to incorporate visual quality and interest in architectural design on all visible sides of buildings through the following approaches: ▪ Utilizing varied massing and roof types, floor plans, detailed planting design, or color and materials; ▪ Maintaining overall harmony while providing smaller-scale variety; and ▪ Articulating building facades with distinctive architectural features like awnings, windows, doors, and other such elements.	**Consistent.** The Project's landscape and architectural design guidelines (Chapter 6 of the Specific Plan Amendment [Appendix A]) for the mixed-use Town Center incorporates standards to ensure visual quality and interest in architectural design that promotes overall harmony within the Project site and creates a vibrant, inviting, pedestrian-scale community. Varied massing and roof types, planting design, color, and materials would be incorporated to give identity to the Town Center and retail/commercial areas within the community. In the Town Center, roofs would include varying rooflines using variations in retail height, stepped parapets, hip or vaulted roofs, domes, towers, and/or other distinct roof forms. Building facades would include storefront windows, outdoor seating and dining, awnings or canopies, decorative lighting, columns or pilasters, and other elements to create visual interest. Other commercial development on site may include office buildings and a hotel. The design guidelines similarly ensure varied massing and

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	roof types, harmony, and architectural interest in implementing these other permitted commercial uses.
Policy LCC.2-23: Ensure that commercial uses are designed to incorporate ground floor transparency and pedestrian activity.	**Consistent.** Ground floor commercial and mixed-uses are designed to incorporate transparent windows. Clear glazing is preferred. Opaque, heavily tinted, and reflective glass would not be used on the first floor of building frontages facing streets, the lake, a park, or a similar public open space.
Policy LCC.2-24: At intersections on the mixed use corridors, prioritize retail and other uses that promote pedestrian activity on the ground floor of buildings.	**Consistent.** While this policy appears to apply to the new, Mixed-Use Boulevard designation along Perris Boulevard in the City, the Project design promotes retail and other uses that promote pedestrian activity on the ground floor in the mixed-use Town Center.
Policy LCC.2-25: Encourage the development of bicycle, pedestrian, and transit access that reduces the need for on-site parking. Improve the pedestrian experience within these corridors through street trees and landscaping.	**Consistent.** The Project plans for an integrated, connected Downtown Center neighborhood intended to maximize walkability, bikeability, and transit use as part of an efficient transportation network in the City. The Project incorporates transit, pedestrian and bicycle routes, and other multimodal transportation programs and technologies to move residents efficiently to and from major job centers and reduce the need for on-site parking. Extensive parks, trails, the lake promenade and open space features, sidewalks, walkways, and roadways on site would encourage biking and walking. The Project would also provide a tram to job centers, enhanced transit, ridesharing, electric bicycles, and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures. Trees and landscaping would be used throughout the site, along streets, and along multi-use trails and sidewalks, which would improve the pedestrian experience and have a cooling effect to further promote walking and biking
Policy LCC.2-27: Where possible, require that adjacent uses share driveways in order to limit the number of curb cuts along Alessandro, Sunnymead, Nason, and Perris.	**Consistent.** No driveways are presently proposed along Nason. While the precise location of driveways would be determined as Project development is implemented, it is generally intended that driveways would be located along neighborhood streets, where feasible, rather than along arterials such as Nason. Alessandro, Sunnymead, and Perris do not provide access to the site.
Policy LCC.2-28: Encourage landscaped common public spaces to be incorporated into new mixed-use development.	**Consistent.** The Project proposes to create a vibrant economic and social core within the center of the City, including lake features, a lake promenade, and public spaces within the Downtown Center. Drought tolerant, sustainable landscaping would be professionally maintained throughout the development.

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Policy LCC.2-29: Design of public spaces should ensure they are: ▪ Lined with active uses at-grade and located near building entrances, windows, outdoor seating, patios, or balconies that overlook park spaces, and other areas with strong pedestrian activity. ▪ Be completely visible from at least one street frontage and as feasible, be at least 50% visible from a secondary street frontage. ▪ Primarily defined by adjacent buildings, which will contribute to the unity and environmental quality of the space. ▪ Be located at the same grade level as the public sidewalk when possible. Where changes in grade are an important element of the overall design and programming, clear and direct access from the public sidewalk should be accommodated, and universal accessibility provided. ▪ Reflect the design and placemaking elements of the surrounding area through the use of architectural styles, signage, colors, textures, materials and other elements. ▪ Be constructed with low impact and permeable paving materials to efficiently manage the stormwater and minimize the area's heat island effect. ▪ Connect to bike and pedestrian facilities and be a part of an interconnected pathway or parkway system where feasible.	**Consistent.** Public spaces along Project streetscapes, gathering places, parks, the lake and lake promenade, and elsewhere would be lined with active uses at-grade to activate the outdoor environmental and promote social spaces, As set forth in Chapter 6 of the Specific Plan Amendment (Appendix A), the public streetscape would include sidewalks and walkways that would be set back from the street, landscaping and trees, stoops, clearly defined entries, outdoor seating areas, hardscaping, and artwork and water features incorporated at grade. Accent walls, low patio walls, and seat walls may be incorporated into the residential uses and streetscape, as well as enclosed patio seating. Central gathering areas would be provided in the Town Center, lake and lake promenade, parks, and open spaces and would be defined by the adjacent buildings and views across the lake to the mountains beyond. Public spaces would be designed to reflect placemaking elements of the surrounding area, with specific styles, signage, colors, textures, materials, and other elements defined further at the village level. Heat island effects would be minimized through use of low impact and permeable paving, creation of the lake, and tree coverage to create an urban forest and arboretum experience. Bike and pedestrian facilities would connect throughout the public spaces on site to residential neighborhoods and the retail Town Center on site and to employment centers and recreation beyond the Project's limits.
Policy LCC.2-30: Establish parks and plazas to serve as meeting areas in new neighborhoods and ensure a safe and secure environment through the development review and approval process.	**Consistent.** The Project establishes an integrated, connected Downtown Center neighborhood with 80 acres of parks, composed of the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks, to serve as meeting areas for the Project and the broader community. Site lighting throughout the community would provide a level of safety while helping to define the character of the Project. Street, parking area, promenade, trail, and park lighting would each be designed to meet all City requirements. Lighting would complement the Project design, and all lighting would be designed to be hooded and facing downwards so as to provide safety in key areas such as parks while not spilling onto adjacent properties.
Goal LCC-3: Build a distinctive sense of place and pride in Moreno Valley.	**Consistent.** The Project would implement the long-held vision of the City to see the Project site transformed into a mixed-use community of housing, commercial uses, a lake system, and associated cultural, civic, and entertainment amenities. The Project maximizes

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	and upgrades this vision and would add 12,078 multifamily residences, implementing an urban hub destination, 40-acre lake system, parks, lake promenade, and 15,000 multifamily residential units to establish the social and recreational fabric of the community. Architectural design, landscaping, and monument features would further build a distinctive sense of place and pride at the site and in the City.
Policy LCC.3-1: Insist on high-quality development that is sensitive to surrounding context throughout the city and particularly in centers and corridors.	**Consistent.** The Project site is surrounded by and proximate to existing residential uses, schools, the Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, Moreno Valley College, World Logistics Center, and UCR. The Project would provide 12,078 multifamily units to the Downtown Center area. As an update to the 2005 Aquabella SPA, the Project would provide additional housing within a planned integrated community for the workforce, educators, students, and other residents to enjoy, together with a variety of commercial, retail, recreational, social, and visitor-serving amenities. Attractive architecture, landscaping, open spaces, gateway entry points, the lake system, lake promenade, and other amenities would implement a high-quality development while assisting the City to meet its housing needs along the Nason Street corridor in the Downtown Center.
Policy LCC.3-2: Use development standards to ensure smooth transitions for areas that border one another so that neighborhoods and districts maintain their unique qualities while being compatible with one another.	**Consistent.** Chapters 5 and 6 of the Specific Plan Amendment (Appendix A) provide development standards and design guidelines for future development within the Project, which would ensure smooth transitions for areas that border one another, thereby maintaining neighborhoods' and districts' unique qualities.
Policy LCC.3-3: Promote the Moreno Valley College as a community asset that contributes to local identity and seek to better integrate the College with the rest of the city, including the Downtown Center and adjacent neighborhoods through urban design, transportation linkages, and promotion of College events.	**Consistent.** The Project site is located proximate to Moreno Valley College and would provide an integrated mixed-use residential community for area workforce, educators, students, and other residents to enjoy. The Project would provide walking, bike, car, and transit connections to the college through extending on-site sidewalks, walkways, trails, and roadways, as well as providing a tram to job centers, enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures. The Project site would also provide an urban Town Center to host and promote local events.
Policy LCC.3-4: Strengthen the sense of arrival into Moreno Valley and the Downtown Center with gateway design at the locations shown on Map LCC-3. Gateway	**Consistent.** Key entry gateway points, attractive architectural and streetscape design, and signage and monuments would strengthen the sense of arrival to

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
design elements shall include streetscape design, signage, building massing, and similarly themed design elements.	the Downtown Center and Aquabella community. Building massing would be an appropriate size and scale, and the lakes, lake promenade, and other amenities provided by the Project would create a sense of space and community within the Downtown Center.
Policy LCC.3-5: Incorporate prominent corner architectural features, such as prominent entries or corner towers, on new development at key intersections or gateways.	**Consistent.** Prominent entry monumentation structures, wayfinding, and signature tree groves would be provided at enhanced gateway entries to the site. See Specific Plan Amendment Figures 6-9 and 6-10 (Appendix A).
Policy LCC.3-6: Maintain continuity in streetscape design along major streets and avenues that traverse the city north to south and east to west.	**Consistent.** The Project would complete streetscape design along major streets in a manner that continues to build character and identity of the area. The wide, integrated walkways and trails would connect to other City and regional trails off site.
Policy LCC.3-7: Continue to support community identity with streetscape improvement and beautification projects in both existing residential areas and commercial centers, as well as new mixed-use areas that incorporate unified landscaping and pedestrian amenities. Amenities should include bus shelters, pedestrian safety treatments such as sidewalk bulb-outs and widening and improved crosswalks, and city-branded decorative elements such as street lighting, concrete pavers, tree grates, and theme rails.	**Consistent.** Unified landscaping and pedestrian amenities would be incorporated into the Project. Drought tolerant, sustainable landscaping would be professionally maintained throughout the development. Pedestrian amenities would include bus/tram shelters, pedestrian safety treatments such as landscaped street chokers, improved crosswalks, bridges over arterials and the on-site drainage, landscaped medians, and decorative elements such as street and trail lighting, concrete pavers, and benches.
Goal LCC-4: Expand the range of housing types in Moreno Valley and ensure a variety of options to suit the needs of people of all ages and income levels.	**Consistent.** The Project would provide a range of multifamily residential housing options within the Downtown Center to meet the needs of people of all ages and income levels, including area workers, students, educators, and those in the health care field.
Policy LCC.4-1: Promote a range of residential densities throughout the community to encourage a mix of housing types in varying price ranges and rental rates.	**Consistent.** Designed to allow flexibility in implementing the Project in a manner that best meets the City's housing needs, the Project would provide housing at a range of types, densities, and prices.
Policy LCC.4-2: Promote the development of a greater variety of housing types, including single-family homes on small lots, accessory dwelling units, townhomes, lofts, live-work spaces, and senior and student housing to meet the needs of future demographics and changing family sizes.	**Consistent.** A diverse range of housing options would be provided with the Project, including garden style stacked flats, row townhomes, duplex homes, attached courtyard homes, and housing available to seniors and students to meet the needs of future demographics and changing family sizes.
Policy LCC.4-3: Encourage a mix of for sale and rental housing units in centers and corridors.	**Consistent.** The residential areas surrounding the Project site are composed of mostly single-family, for-sale units, with some multifamily units to the south. The Project would focus rental housing units in this underserved rental area, thereby providing a suitable mix of for-sale and for-rent units in the City center.

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
Policy LCC.4-4: Encourage multi-family developments and live-work units in residential mixed-use areas to provide housing options that are affordable for artists, creative entrepreneurs, emerging industries, and home-based business operators.	**Consistent.** Multifamily housing would be provided at a range of types, densities, and prices that would meet the needs of a range of residents, such as artists, creative entrepreneurs, emerging industries, and home-based business operators.
Policy LCC.4-5: Encourage the use of innovative and cost-effective building materials, site design practices and energy and water conservation measures to conserve resources and reduce the cost of residential development.	**Consistent.** Environmental sustainability and innovation is a primary vision for the Project. The site would reduce energy usage through encouraging pedestrian, bike, and transit use by designing welcoming trail, sidewalk, walkway, and transit facilities. Enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and trams to adjacent and proximate major job centers would also reduce energy and resource use. EV charging stations would be integrated throughout the community. Building materials and site design would comply with California's Building Energy Efficiency Standards, which reduce wasteful and unnecessary energy consumption in newly constructed buildings related to efficient materials, solar generation, and water usage. Water would be conserved on site through the use of native and drought-tolerant plants in landscaping. In addition, through the implementation of sophisticated BMPs, the lakes would act to treat and store runoff on site, conserving water resources that would otherwise be wasted and allowing its use as on-site irrigation.
Policy LCC.4-6: Cater to the needs of larger, multi-generational families by both promoting the development of 3 and 4-bedroom homes and by facilitating construction of accessory dwelling units.	**Consistent.** Three-bedroom multifamily homes proposed by the Project would cater to the needs of larger, multi-generational families. While the Project does not plan for the construction of accessory dwelling units, they would be permitted to the extent prescribed by state law.
Policy LCC.4-7: Promote availability of senior and independent assisted living facilities distributed equitably throughout the community to meet the needs of the community's aging population.	**Consistent.** While the Project is not age-restricted for seniors, the multifamily homes it would provide are intended to meet a range of housing needs, price ranges, and residential age ranges. Seniors would be one demographic that may be targeted due to the relatively lower cost of multifamily living and extensive amenities, recreational options, and nearby shopping, restaurants, and social experiences that the Project would provide.
Policy LCC.4-8: Facilitate opportunities to incorporate innovative design and program features into affordable housing developments, such as on-site health and human services, community gardens, car-sharing, and bike facilities. Support the	**Consistent.** Located adjacent to two major medical centers, the Project presents a unique opportunity to connect health services with the visitor-oriented, recreational, and commercial/retail services on site. Pedestrian bridges may connect the site to the

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
development of projects that serve homeless and special needs populations.	adjacent medical centers, and bike lanes, multi-use trails, and shared road facilities would be included throughout the site. Health care–related uses are permitted within the Project. Extensive landscaping, parks, and open space areas would be provided on site, and the lake promenade would incorporate stylized gardens, follies, and other amenities to create the feeling of an arboretum. While the Project is not income restricted, its variety of multifamily home types and sizes would provide workforce affordable homes with these design features and amenities.
Policy LCC.4-9: Densities in excess of the maximum allowable density for residential projects may be permitted pursuant to California density bonus law.	Consistent. The Project would comply with the California density bonus law.
Economic Development Element	
Goal E-1: Diversify and grow the local economy	Consistent. The Project's 15,000 multifamily homes and supporting commercial, recreational, and educational uses proximate to the World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, UCR, Moreno Valley College, and regional and local shopping and commercial centers would support the vitality of these existing commercial, retail, industrial, medical, and educational employers and growth in the industries locally. Taking advantage of the Project's unique location in the geographic center of the City, the walkable retail Downtown Center, 300-room hotel, lakes and lake promenade, parks, schools, trails, and housing on site would implement moments and experiences that cannot be found elsewhere in the City or Inland Empire. The Project's 25 acres of commercial and retail uses have been designed to create a vibrant, premier downtown area to directly grow the local economy with locally and regionally serving commercial/retail mixes uses. Further, by providing homes that are affordable to the area workforce, employers thinking of relocating to the City and region would be better able to do so while recruiting and retaining employees.
Goal E-2: Strengthen and retain existing businesses.	Consistent. The Project's 15,000 multifamily homes and supporting commercial, recreational, and educational uses proximate to the World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Moreno Valley campus, UCR, Moreno Valley College, and regional and local shopping and commercial centers would support the vitality of these existing commercial, retail, industrial, medical, and educational employers and growth in these area industries locally. Homes affordable to the area workforce would mean employers would be able

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2040 General Plan Policies	Project Consistency
	to retain employees, and employees would be able to live and work in the City. Residents of the Project would also be customers to local businesses, strengthening the overall customer base in the City. Further, the Project's Town Center would create a vibrant social center and premier destination within the City, improving the quality of life in central Moreno Valley with quality schools, parks, multi-use trails, responsive public services, and reliable utility infrastructure.
Policy E.2-2: Strengthen the existing medical/hospital cluster by facilitating the establishment of supportive businesses and uses such as surgical centers, medical offices, post-acute care medical facilities, conference space, hotels, restaurants, and retail shops.	**Consistent.** The Project takes advantage of its location within the existing medical/hospital cluster and plans for supporting business, including the 300-room hotel, which could be used by visitors to the nearby medical/hospital facilities, and uses to strengthen these facilities. The cutting-edge Town Center would be located proximate to the Riverside University Health System Medical Center and Kaiser Permanente Moreno Valley campus, creating a centralized and accessible core. High-quality restaurants and retail offerings, together with and civic, cultural, and/or entertainment events, would activate this Town Center throughout the day and into the evening. The integrated lake, lake promenade, parks, multi-use trails network, and school features promote a walkable, bikeable, and active environment for residents, visitors, and workers to enjoy. The human-scale design, parks, lakes, and trails strengthen the connectivity between the Project and adjacent uses, integrating into the rhythm of daily activity in the area.
Policy E.2-4: Support the vitality of existing logistics, e-commerce, and international trade businesses.	**Consistent.** The Project's 15,000 multifamily homes and supporting commercial uses would help to house employees of logistics business in the City including the World Logistics Center, which is in the process of developing over 40 million square feet of logistics uses approximately 2.5 miles from the site. Transit and trams would provide daily transport for residents to the World Logistics Center, Riverside University Health System Medical Center, Kaiser Permanente Hospital, and the Moreno Valley March Field Train/Metrolink Station. Tram stops would be provided at each neighborhood entry on arterial streets for convenient access. The Project would also support the entertainment, commercial, recreational, educational, and other needs of logistics workers and businesses in the City and region.
Policy E.2-8: Cultivate a vibrant retail, entertainment, and restaurant sector and minimize retail sales leakage by concentrating new residential	**Consistent.** The Project envisions a high quality and vibrant downtown center where residents and visitors can live, work, play, and shop. The Downtown Center

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
development in locations where it can support retail vitality, and by attracting higher wage jobs to Moreno Valley to support a robust retail economy.	area balances a mix of retail businesses and restaurants, which would be supported by the concentration of new residential development. The size and scale of the proposed Project is designed to maximize walkability and bikeability to encourage daily interaction between these complementary land uses and minimize retail sales leakage. Workforce housing would also attract better jobs to the City as employers thinking of relocating here would be better able to do so while recruiting and retaining employees.
Goal E-3: Enhance Moreno Valley's profile and competitive position.	**Consistent.** The proposed Project proposes to deliver a premier mixed-use, urban village and Downtown Center within the geographic center of the City. The Project is guided by the overall goal of creating a unique, neighborhood downtown center where residents and visitors can live, work, play, and shop. The Project would retain the character of the surrounding area, connect it to the adjacent uses, and create a hub of diverse multifamily residential home options within the center of the City to address the needs of the City's existing and future residents; accommodate and enhance jobs in on-site, adjacent, and proximate major job centers in order to reduce long commutes; achieve a better balance of jobs to housing; and facilitate job growth in central Moreno Valley.
Policy E.3-8: Provide a range of housing types – from apartments and condominiums to starter homes and executive housing – throughout the community to attract new businesses and encourage expansion.	**Consistent.** A diverse range of housing options would be provided with the Project, including duplexes; duet, or paired, homes; cluster and courtyard homes; townhomes; apartments; live/work homes; and homes available to students and seniors. The Project is complementary to and compatible with the mostly single-family, for-sale units surrounding the site. This balanced range of housing types would meet a variety of housing needs to attract new businesses and encourage expansion in the community.
Policy E.3-10: Promote and support recreational, sporting, cultural, and entertainment events in and around Moreno Valley to build the city's reputation as a desirable destination and help create opportunities for increased visitation, hotel stays, sales tax generation, and employment.	**Consistent.** The proposed Project's central Town Center area would provide opportunities for recreation, shopping, entertainment events, and other visitor-servicing and cultural uses. The Project would provide 80 additional acres of parks, composed of the previously approved 40 acres of lakes, a 15-acre lake promenade feature, and 25 acres of other additional parks. The parks, trails, and open space features would be walkable and bikeable, providing ample recreational area and serving as gathering places for the community. The lake system may be used for water sports, such as swimming, paddle boarding, kayaking and canoeing. Proximate to the Lake Perris State Recreation Area and connected through sidewalks, trails, and bike paths, residents would be

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2040 General Plan Policies	Project Consistency
	able to take advantage of its myriad recreational activities, including camping, picnicking, fishing, swimming, water sports, and boating.
Circulation Element	
Goal C-1: Strengthen connections to the regional transportation network.	**Consistent.** The site's primary circulation spine road improvements along Nason Street have already been completed, which connects to State Route 60 to the north. The Project plans to complete an extension of John F. Kennedy Dr. through the central portion of the site, which in turn connects to I-215 to the west. The Project would thereby strengthen connections through the City to the regional roadway network. The RTA provides existing bus routes proximate to the site. Route 31 runs along Nason Street to the Riverside University Medical Center. Route 20 also serves the site along Alessandro, Nason, and Moreno Beach Dr to Riverside University Medical Center, Kaiser Permanente Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across I-215. The Project would also provide enhanced transit, pedestrian and bicycle routes, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and a tram proximate to major job centers and the Metrolink station, further bolstering and responding to the demands of the regional transportation network. Internal streets within the Project would facilitate bike routes and connectivity to the existing bike network. PDF-TRANS-5 and PDF-TRANS-7 would further promote bike use through a bikeshare program and end-of-route facilities such as bike lockers and showers. Further, the Project proposes to work with RTA to improve existing route frequencies, service hours, and routes to expand the transit system throughout the Project site, surrounding school and medical uses, nearby industrial employment centers, and the broader Moreno Valley. See PDF-TRANS-9 through PDF-TRANS-12 in Section 4.17.5.
Policy C.1-1: Support regional infrastructure investments for all modes to relieve congestion and support healthy communities in the City of Moreno Valley.	**Consistent.** The site's primary circulation spine road improvements along Nason Street have already been completed, which connects to State Route 60 to the north. The Project plans to complete an extension of John F. Kennedy Dr. through the central portion of the

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
	site, which in turn connects to I-215 to the west. Circulation improvements would be provided throughout the Project site and at off-site areas as identified in the SEIR. The Project would provide enhanced transit, pedestrian and bicycle routes, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and a tram proximate to major job centers and the Metrolink station, further bolstering and responding to the demands of the regional transportation network. Internal streets within the Project would facilitate bike routes and connectivity to the existing bike network. PDF-TRANS-5 and PDF-TRANS-7 would further promote bike use through a bikeshare program and end-of-route facilities such as bike lockers and showers. Further, the Project proposes to work with RTA to improve existing route frequencies, service hours, and routes to expand the transit system throughout the Project, surrounding school and medical uses, nearby industrial employment centers, and the broader Moreno Valley. See PDF-TRANS-9 through PDF-TRANS-12 in Section 4.17.5. The Project would be conditioned to pay such appropriate impact fees as determined by the City's impact fee schedule and other laws to ensure the provision of adequate infrastructure to serve the Project's development.
Goal C-2: Plan, design, construct, and maintain a local transportation network that provides safe and efficient access throughout the city and optimizes travel by all modes.	**Consistent.** The Project would provide for high-quality roadway, trail, and pedestrian improvements that maintain a safe and efficient transportation network, whether by walking, biking, or car. Residents would be able to make use of RTA bus routes and connections to the Metro and Amtrak station west of I-215. Daily tram service to job centers and the Metrolink station, enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures would further optimize transit and travel by all modes. Internal streets within the Project would facilitate bike routes and connectivity to the existing bike network. PDF-TRANS-5 and PDF-TRANS-7 would further promote bike use through a bikeshare program and end-of-route facilities such as bike lockers and showers. Further, the Project proposes to work with RTA to improve existing route frequencies, service hours, and routes to expand the transit system throughout the Project, surrounding school and

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2040 General Plan Policies	Project Consistency
	medical uses, nearby industrial employment centers, and the broader Moreno Valley. See PDF-TRANS-9 through PDF-TRANS-12 in Section 4.17.5.
Policy C.2-1: Design, plan, maintain, and operate streets using complete streets principles for all types of transportation projects including design, planning, construction, maintenance, and operations of new and existing streets and facilities. Encourage street connectivity that aims to create a comprehensive, integrated, connected network for all modes.	**Consistent.** The lake promenade and integrated trail system would connect the residential, retail, restaurant, recreational, hotel, and other uses, providing a route that users can walk and bike along. Sidewalk improvements would be provided throughout the community to promote walking. Bike lanes and shared-use streets would be incorporated through the Project site to complement the new and existing development in a way that promotes the human scale. These bike lanes would connect to existing Class II bike lanes on Cactus Ave., Nason Street, Iris Ave., Lasselle Street, and John F. Kennedy Dr. The proposed Project's circulation system and the regional system with which it connects have been thoroughly studied by traffic engineers. To accommodate the influx in residents and visitors in the community, the Project plans to complete an extension of John F. Kennedy Dr. through the central portion of the Project site, which in turn connects to I-215 to the west. Circulation improvements would be provided throughout the Project site and at off-site areas as identified in the SEIR.
Policy C.2-5: Prohibit points of access from conflicting with other existing or planned access points. Require points of access to roadways to be separated sufficiently to maintain capacity, efficiency, and safety of the traffic flow.	**Consistent.** Key entry points would provide access to the Project site along Cactus Street, John F. Kennedy Dr., Nason Street, Iris Ave., Lasselle St., and Oliver St. The Project's circulation system and the regional system with which it connects have been thoroughly studied by transportation engineers; the access points have been shown to sufficiently maintain the capacity, efficiency, and safety of the traffic flow.
Policy C.2-6: Wherever possible, minimize the frequency of access points along streets by the consolidation of access points between adjacent properties on all circulation element streets, excluding collectors.	**Consistent.** Key gateway entry points would provide access to the Project site along Cactus Street, John F. Kennedy Dr., Nason Street, Iris Ave., Lasselle St., and Oliver St. Access points to outside the Project site would be consolidated on these existing circulation element streets as identified by the 2040 General Plan.
Policy C.2-7: Plan access and circulation of each development project to accommodate vehicles (including emergency vehicles and trash trucks), pedestrians, and bicycles.	**Consistent.** The Project's circulation system and the regional system with which it connects have been thoroughly planned and studied by transportation engineers and planners to accommodate vehicles, pedestrians, and bicycles. The lake promenade and integrated trail system would connect the residential, retail, restaurant, recreational, hotel, and other uses, providing a route that users can walk and bike along. Sidewalk and multi-use trail improvements would be provided throughout the community to further

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2040 General Plan Policies	Project Consistency
	promote walking. Bike lanes and shared streets would be incorporated throughout the community and would connect to existing bike routes on adjacent roadways. Connections to existing Class II bike lanes would include connections to Cactus Ave., Nason Street, Iris Ave, Lasselle Street, and John F. Kennedy Dr.
Policy C.2-8: For developments fronting both sides of a street, require that streets be constructed to full width. Where new developments front only one side of a street, require that streets be constructed to half width plus an additional 12-foot lane for opposing traffic, whenever possible. Additional width may be needed for medians or left and/or right turn lanes.	**Consistent.** Chapter 6, Design Guidelines, of the Specific Plan Amendment (Appendix A), sets out street widths both within and adjacent to the Project, and requires that all streets be constructed to their full required widths.
Policy C.2-9: Require connectivity and accessibility to a mix of land uses that meets residents' daily needs within walking distance. Typically, this means creating walkable neighborhoods with block lengths between 330 feet and 660 feet in length, based on divisions of the square mile grid on which the city is laid out.	**Consistent.** The size and scale of the Project plans for an integrated, connected community intended to maximize walkability and encourage day-to-day interaction between the mix of complementary land uses within the Project area—all as part of an efficient transportation network in central Moreno Valley that incorporates automobile travel, transit, pedestrian and bicycle routes, and other multimodal transportation programs and technologies that would move residents efficiently to and from major job centers. As outlined in PDF-LU-1, PDF-LU-2, PDF-LU-5. PDF-LU-7, and PDF-LU-8, circulation on the Project site would be designed to be connected, walkable, and bikeable. Further, streetscape and landscape design would be at pedestrian scale and all Project features would be fully integrated into the transportation system. The Project would implement PDF-LU-3, which requires walkable blocks of up to 600 feet in length to promote walkability.
Policy C.2-10: Ensure that complete streets applications integrate the neighborhood and community identity into the street design and retrofits. This can include special provisions for pedestrians and bicycles that complement the context of each community.	**Consistent.** Complete streets are proposed that would promote pedestrian and bicycle use through the incorporation of design features such as multi-use trails and sidewalks, crosswalks, shared roads, landscaping, and pedestrian bridges across arterials and the on-site drainage (PDF-LU-9).
Policy C.2-11: Incorporate traffic calming design into local and collector streets to promote safer streets.	**Consistent.** Traffic calming design of neighborhoods streets includes street chokers, crosswalks, roundabouts landscaped medians, and shared street design to promote safer streets (PDF-LU-10).
Action C.2-H: Evaluate opportunities to implement roundabouts as traffic control as new development projects are proposed, considering safety, traffic calming, cost, maintenance and greenhouse gas reduction related to idling.	**Consistent.** The Project would include roundabouts as a means of traffic calming and greenhouse gas emissions reduction (PDF-LU-10).

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2040 General Plan Policies	Project Consistency
Goal C-3: Manage the City's transportation system to minimize congestion, improve flow and improve air quality.	**Consistent.** The Project's circulation system and the regional system with which it connects have been thoroughly planned and studied by transportation engineers and planners to accommodate vehicles, pedestrians, and bicycles in a manner that minimizes congestion, improves traffic flow, and improves air quality. The lake promenade and integrated trail system would connect the residential, retail, restaurant, recreational, and other uses, providing an opportunity for walking and biking. Sidewalk improvements would be provided throughout the community to further promote walking. Bike lanes and shared streets would be incorporated throughout the community and connect to existing bike routes on adjacent roadways. Connections to existing Class II bike lanes would include connections to Cactus Ave., Nason Street, Iris Ave., Lasselle Street, and John F. Kennedy Dr. Residents would be able to make use of RTA bus routes and connections to the Metro and Amtrak station west of I-215. Enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and trams to job centers and the Metrolink station would further optimize transit and travel by all modes. For drivers, the Project would include roundabouts, signalization, restriping, and other elements to improve traffic flow and air quality. The Project would also include PDF-TRANS-1 through PDF-TRANS-12, which would result in reduction of overall trips generated by the Project.
Policy C.3-1: Strive to maintain Level of Service (LOS) "C" on roadway links, wherever possible, and LOS "D" in the vicinity of SR 60 and high employment centers. Strive to maintain LOS "D" at intersections during peak hours.	**Consistent.** Transportation engineers Urban Crossroads completed a LOS assessment consistent with the City's traffic impact study guidelines. The analysis identified the anticipated LOS at City roadways and intersections with Project development, as well as feasible measures that may be employed to maintain LOS C and D at impacted roadways and intersections, where appropriate. See Appendix K3 to this SEIR.
Policy C.3-2: Allow for a list of locations to be exempt from the LOS policy based on right-of-way constraints and goals and values of the community. The City Engineer shall update the exempted intersections and roadway segments list periodically to be included with the traffic impact study guidelines and adopted by ordinance.	**Consistent.** The 2040 General Plan focuses on efficient circulation in a manner that balances LOS with other considerations and measures, such as the City's commitment to complete streets to accommodate bicyclists and pedestrians, costs, safety, alternative transportation and transit, physical space, greenhouse gas emissions, community character, and VMT. The Project, too, focuses on balancing LOS with these other holistic circulation considerations.

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	Transportation engineers Urban Crossroads completed a LOS assessment consistent with the City's traffic impact study guidelines. The analysis identified the anticipated LOS at City roadways and intersections with Project development, as well as feasible measures that may be employed to maintain LOS C and D at impacted roadways and intersections, where appropriate. See Appendix K3 to this SEIR. Where LOS C or D cannot be maintained, it may be exempted based on these other considerations.
Policy C.3-3: Where new developments would increase traffic flows beyond the LOS C (or LOS D, where applicable), require appropriate and feasible improvement measures as a condition of approval. Such measures may include extra right-of-way and improvements to accommodate additional left-turn and right-turn lanes at intersections, or other improvements.	**Consistent.** Transportation engineers Urban Crossroads completed a LOS assessment consistent with the City's traffic impact study guidelines. The analysis identified the anticipated LOS at City roadways and intersections with Project development, as well as feasible measures that may be employed to maintain LOS C and D at impacted roadways and intersections, where appropriate. See Appendix K3 to this SEIR.
Policy C.3-4: Require development projects to complete traffic impact studies that conduct vehicle miles traveled analysis and level of service assessment as appropriate per traffic impact study guidelines.	**Consistent.** Transportation engineers Fehr & Peers and Urban Crossroads have completed a VMT and LOS assessment, respectively, consistent with the City's traffic impact study guidelines. These analyses are provided as Appendix K3 to this SEIR.
Policy C.3-6: Require new developments to participate in Transportation Uniform Mitigation Fee Program (TUMF), the Development Impact Fee Program (DIF) and any other applicable transportation fee programs and benefit assessment districts.	**Consistent.** The Project would be conditioned to pay such appropriate TUMF, DIF, and other applicable fees as determined by the City's impact fee schedule to ensure the provision of adequate transportation infrastructure to serve the development proposed by the Project.
Policy C.3-8: Ensure that new development pays a fair share of costs to provide local and regional transportation improvements and to mitigate cumulative traffic deficiencies and impacts.	**Consistent.** The Project would be conditioned to pay its fair share of a variety of transportation improvements, as set forth in the traffic impact study, Appendix K3 to this SEIR.
Policy C.3-9: Employ parking management strategies, such as shared parking in mixed use areas, on-street residential parking, and spill-over parking to avoid construction of unnecessary parking.	**Consistent.** The Specific Plan Amendment provides for the application of efficient parking standards to avoid the construction of unnecessary parking. See Specific Plan Amendment, Table 5-2, Off-Street Parking Requirements (Appendix A).
Policy C.3-11: Implement National Pollutant Discharge Elimination System Best Management Practices relating to construction of roadways to control runoff contamination from affecting water resources.	**Consistent.** The Project would be conditioned to implement NPDES BMPs related to the construction of roadways to control runoff as set forth in the SEIR, Section 4.10, Hydrology and Water Quality.
Goal C-4: Provide convenient and safe connections between neighborhoods and destinations within Moreno Valley.	**Consistent.** The lake promenade and integrated trail system would connect the residential, retail, restaurant, recreational, and other uses, providing an opportunity for walking and biking. Sidewalk and multi-use trail improvements would be provided

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	throughout the community to further promote walking and biking. Bike lanes and shared streets would be incorporated throughout the community and connect to existing bike routes on adjacent roadways. Connections to existing Class II bike lanes would include connections to Cactus Ave., Nason Street, Iris Ave., Lasselle Street, and John F. Kennedy Dr. Residents would be able to conveniently walk or bike to the Lake Perris State Recreation Area on bike routes and sidewalks to the south. PDF-LU-5 and PDF-LU-7 would further promote bike use through a bikeshare program and end-of-route facilities such as bike lockers and showers. Residents would be able to make use of RTA bus routes and connections to the Metro and Amtrak station west of I-215. Further, the Project proposes to work with RTA to improve existing route frequencies, service hours, and routes to expand the transit system throughout the Project, surrounding school, medical uses, nearby industrial employment centers, and the broader Moreno Valley. See PDF-TRANS-9 through PDF-TRANS-12 in Section 4.17.5.
Policy C.4-1: Support the development of highspeed transit linkages or express routes connecting major destinations within the city and beyond, including the Metrolink Station, that would benefit the residents and employers in Moreno Valley.	**Consistent**. Residents would be able to make use of RTA bus routes and on-demand connections to the Metro and Amtrak station west of I-215. Electric, multi-occupant trams would operate on site to connect the Town Center and Project neighborhoods with Riverside University Health System Medical Center, Kaiser Permanente Hospital, World Logistics Center, and the Moreno Valley March Field Train/Metrolink Station. Tram stops would be provided at each neighborhood entry on arterial streets for convenient access. Enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, and transportation demand management measures would further optimize transit and travel by all modes.
Policy C.4-2: Collaborate with major employers and other stakeholders to improve access and connectivity to key destination such as the Downtown Center, the Moreno Valley Mall, the hospital complexes, Moreno Valley College, and the Lake Perris State Recreation Area.	**Consistent**. Shuttles provided as part of the Project would connect the site located within the City's Downtown Center to Riverside University Health System Medical Center, Kaiser Permanente Hospital, World Logistics Center, and the Moreno Valley March Field Train/Metrolink Station (PDF-TRANS-14). Improved bike and pedestrian connections, including pedestrian bridges over arterials, would improve access between the Lake Perris State Recreation Area, Moreno Valley College, Downtown Center, and hospital complexes.

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2040 General Plan Policies	Project Consistency
Policy C.4-3: Support the establishment of a Transit Center/Mobility Hub in the Downtown Center.	**Consistent.** Development of the Project would not preclude the establishment of a transit center in the City's Downtown Center. Further, PDF-TRANS-12 includes the development of a mobility hub at or near the Project site.
Policy C.4-4: All new developments shall provide sidewalks in conformance with the City's streets cross-section standards, and applicable policies for designated urban and rural areas.	**Consistent.** Sidewalks and multi-use trails would be provided throughout the community.
Goal C-5: Enhance the range of transportation in Moreno Valley and reduce vehicle miles traveled (VMT).	**Consistent.** The Project site is located in an area with average VMT below that of the City and the region. Focusing mixed use residential development in this Downtown Center area would allow residents, workers, and students to meet their needs to live, work, eat, and play in a centralized location that reduces the need to commute out of the area. VMT would be further reduced through promoting walking, biking, transit, and travel by alternative modes within the site and connected to surrounding uses. The lake promenade and integrated trail system would connect the residential, retail, restaurant, recreational, hotel, and other uses, providing an opportunity for walking and biking. Sidewalk improvements would be provided throughout the community to further promote walking. Bike lanes and shared streets would be incorporated throughout the community and connect to existing bike routes on adjacent roadways including at Cactus Ave., Nason Street, Iris Ave., Lasselle Street, and John F. Kennedy Dr. Residents would be able to conveniently walk or bike to the Lake Perris State Recreation Area to the south. Residents would be able to make use of RTA bus routes and connections to the Metro and Amtrak station west of I-215. Enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and trams to major job centers including the World Logistics Center would further optimize transit and travel by all modes as part of the Project's transportation demand management plan. Thus the proposed Project would enhance the range of transportation options in the City and reduce VMT.
Policy C.5-1: Work to reduce VMT through land use planning, enhanced transit access, localize attractions, and access to non-automotive modes.	**Consistent.** VMT is reduced through the Project's land use design, which plans a premier mixed-use, urban village and Downtown Center within the geographic center of the City and designs it to integrate in a manner that maximizes walkability and bikeability and encourages daily interaction between the mix of complementary land uses. The site would provide opportunities for residents and visitors to live, work,

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2040 General Plan Policies	Project Consistency
	recreate, shop, and dine within walking and biking distance. Enhanced transit, ridesharing, electric bicycles and vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and trams to job centers would further optimize transit and travel by alternative transportation modes.
Policy C.5-3: Encourage bicycling as an alternative to single occupant vehicle travel for the purpose of reducing fuel consumption, traffic congestion, and air pollution.	**Consistent.** Biking would be encouraged as an alternative to vehicular travel. The lake promenade and trail system would connect bicyclists to the community and beyond. In addition, bike lanes and shared streets would be incorporated throughout the community and connect to existing bike routes on adjacent roadways including at Cactus Ave., Nason Street, Iris Ave., Lasselle Street, and John F. Kennedy Dr. Further, PDF-TRANS-5 and PDF-TRANS-7 would further promote bike use through a bikeshare program and end-of-route facilities such as bike lockers and showers.
Policy C.5-4: Particularly in corridors and centers, work with transit service providers to provide first rate amenities to support pedestrian, bicycle, and transit usage, such as bus shelters and benches, bike racks on buses, high-visibility crossings, and modern bike storage.	**Consistent.** Existing bus stops surround the site and are provided at various locations along Lasselle St., Iris Ave., Nason Street, John F. Kennedy Dr., and Gentian Ave., as well as at the Riverside University Health System Medical Center. Specifically, the RTA provides existing bus routes proximate to the site. Route 31 runs along Nason Street to the Riverside University Medical Center. Route 20 also serves the site along Alessandro, Nason, and Moreno Beach Dr to Riverside University Medical Center, Kaiser Permanente Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across I-215. RTA buses include bike racks on all fixed route buses. Shuttle shelters would be provided as part of the Project. The Project would discuss with RTA the opportunity to provide first rate amenities to support transit usage and accommodate additional transit stops within the site.
Action C.5-E: Integrate transit access and information systems into employment centers, major destinations and new multi-family residential development.	**Consistent.** The Project would discuss with RTA the opportunity to integrate transit access and information systems into the Town Center area and the within multifamily neighborhoods. The Project proposes to work with RTA to improve existing route frequencies, service hours, and routes to expand the transit system throughout the Project, surrounding

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	school and medical uses, nearby industrial employment centers, and the broader Moreno Valley. See PDF-TRANS-9 through PDF-TRANS-12 in Section 4.17.5.
Action C.5-F: Develop a Park Once strategy to promote walkability in mixed use centers and corridors.	Consistent. The size and scale of the Project plans for an integrated, connected Downtown Center neighborhood intended to maximize walkability and encourage day-to-day interaction between the mix of complementary land uses within the Project area. Additionally, the Project would include PDF-LU-3 to design block lengths to be no more than 600 feet in length. The lake promenade, sidewalks, and multi-use trails would further encourage walking and biking in lieu of automobile use in the City's Downtown Center.
Parks and Public Services Element	
Goal PPS-1: Provide and maintain a comprehensive system of quality parks, multi-use trails, and recreational facilities to meet the needs of Moreno Valley's current and future population.	Consistent. 80 acres of parks, composed of the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks and multi-use trails, would be implemented with the Project. These park facilities would be designed to meet a variety of passive and active recreational needs. The interconnected lake promenade and trail system would encourage walking and biking and be accessible for use by nearby existing residents, new residents of the community, visitors, and workers at the nearby medical facilities. The lake would provide opportunities for water-based recreation, such as swimming, rowing, and boating. The parks would include areas to accommodate performances and outdoor gatherings and would also support active and passive recreation. The residential uses would also include private recreation facilities for their residents and guests, which may include courtyards, pools, gyms, parks, playgrounds, community open space, gyms, and other facilities. In addition, the Project includes 40 acres of elementary school and middle school uses, which would provide additional recreational facilities to meet the needs of the City's current and future population. Further, the Project would further be conditioned to pay the City's DIF in compliance with 2040 General Plan Policy PPS.1-2 and Municipal Code Sections 3.38 and 3.40.
Policy PPS.1-1: Increase the acreage of parks in Moreno Valley to serve the needs of the growing population and maintain a standard of three acres of parkland per 1,000 residents.	Consistent. The Project would increase City parkland and meet the City's parkland standard. On site, the Project would provide 80 acres of parks, composed of the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks and multi-use trails. The Project would further be conditioned to pay the City's DIF for the approximately 43,050 residents that would be

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	housed by the Project to meet the City's ratio of 3 acres of parks per 1,000 residents.
Policy PPS.1-2: Require that proponents of new development projects contribute to the acquisition and development of adequate parks and recreational facilities within the community, either through the dedication of park land and construction of facilities, or the payment of in-lieu fees.	**Consistent.** The Project would provide 80 acres of parks on site, composed of the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks and multi-use trails. Further, the Project would further be conditioned to pay the City's DIF in compliance with 2040 General Plan Policy PPS.1-2 and Municipal Code Sections 3.38 and 3.40, which would contribute to the acquisition and development of adequate parks and recreational facilities within the community.
Policy PPS.1-3: Locate new parks in the generalized locations shown on Map PPS-1 so that all residents have easy access to a park from their home. New parks should be located outside of the 65 dbl noise contour (see Map N-3) and be accessible by transit	**Consistent.** As shown on Map PPS-1 in the City's 2040 General Plan, several parks currently surround the site that would be accessible to its residents, including Vista Lomas Park, Parque Amistad, Woodland Park, Celebration Park, and Fairway Park. Map PPS-1 identifies the site for a potential Central Park location. 80 acres of park features would be provided with the Project, including the previously approved 40-acre lake system acting as a central park facility, a 15-acre lake promenade feature, and 25 acres of other additional parks. The lake and lake promenade would provide a centralized area for public recreation and entertainment with family-friendly amenities, while also providing pedestrian and bicycle connectivity to the hospitals and residential areas. The parks, including the lake and lake promenade, are designed to be located centrally within the site, which is outside the 65 decibel CNEL existing noise contours shown on Map N-3.
Policy PPS.1-4: Design and construct parks, public spaces and recreational facilities for flexible use, energy efficiency, adaptability over time, and ease of maintenance.	**Consistent.** The parks, public space, and recreational facilities would be designed for a variety of passive and active recreational uses including performances and outdoor gatherings, walking, biking, rowing, boating, sports fields, and play areas. The facilities would be designed to include drought tolerant landscaping, groundcovers, and enhanced hardscape materials to define the character of the community while minimizing maintenance and water needs. Energy efficient and shielded LED lighting would reduce maintenance needs and be sensitive to night sky conditions.
Policy PPS.1-5: Use site design, landscaping, lighting, and traffic calming measures to create safe parks and open spaces integrated with adjacent developments.	**Consistent.** The parks, including the lake and lake promenade, are designed to be centrally located within the site with trail and sidewalk connections integrated with adjacent developments. The plant design for the community would help create an integrated sense of place and transition between the

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2040 General Plan Policies	Project Consistency
	park and open space areas and more refined planting within the new residential uses and existing adjacent developments. Landscaping would be used to provide a physical and visual buffer between the existing adjacent development and new community, while maximizing the maintenance of views. Energy efficient and shielded LED lighting would ensure public safety while preventing spillover onto adjacent properties and protecting night sky conditions. Traffic calming measures including roundabouts would help create a pedestrian-friendly sense of place.
Policy PPS.1-9: Design and construct the multi-use trail network to connect parks, plazas, and open spaces within the community and promote access to these spaces.	**Consistent.** The lake promenade and multi-use trail network would connect the community and provide access to the mix of complementary retail, restaurant, recreation, residential, hotel, and school uses. The neighborhood and trail design is intended to maximize walkability and would connect and promote access to the parks, plazas, and open spaces within the community.
Action PPS.1-A: Prioritize the creation of a Central Park facility in the Downtown Center large enough to serve as an amenity and a focal point for the whole community and a draw for visitors from the wider region.	**Consistent.** 80 acres of park features would be provided with the Project, including the previously approved 40-acre lake system acting as a central park facility, a 15-acre lake promenade feature, and 25 acres of other additional parks. The Town Center, lake, and lake promenade would provide centralized areas for public recreation and entertainment with family-friendly amenities that would serve as an amenity and focal point for the community and a draw for visitors from the wider region.
Goal PPS-2: Locate, design, and program public facilities as contributors to neighborhood quality of life.	**Consistent.** Public facilities are allowed uses on site. Neighborhood parks and open space would be located and designed to meet the needs of the neighborhood, provide open space, and promote quality of life.
Policy PPS.2-1: Provide community centers, arts/cultural facilities, libraries, and other community-oriented facilities and programming, ensuring they respond to the diverse interests, needs, ages, and cultural backgrounds of Moreno Valley residents at reasonable costs and are distributed equitably and conveniently throughout Moreno Valley.	**Consistent.** Public facilities such as arts/cultural facilities, community centers, and libraries are allowed uses within the Project and may be provided in the Town Center to help meet the needs of the community.
Policy PPS.2-2: Encourage privately operated and community-based recreation opportunities, such as climbing gyms, fitness centers, yoga studios, dance schools and other hobby-oriented businesses.	**Consistent.** Private and community-based recreation such as climbing gyms, fitness centers, and yoga studies are allowed uses within the Project.
Goal PPS-3: Provide for responsive police and fire services that ensure a safe and secure environment for people and property.	**Consistent.** Police and fire services would be ensured through the condition that the Project make a fair share funding contribution to the City consistent with the City's Municipal Code and Fee Schedule, subject to any credits that may be given against such a fee for constructing facilities on site or elsewhere in the City. The development of a fire station or an office for

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	police use would be allowable uses in the Specific Plan Amendment. Such development would be subject to review and approval by the City fire and police departments as to sizing, location, and need.
Policy PPS.3-6: Continue to require that new development make a fair share funding contribution to ensure the provision of adequate police and fire services.	Consistent. Police and fire services would be ensured through the condition that the Project make a fair share funding contribution to the City consistent with the City's Municipal Code and Fee Schedule, subject to any credits that may be given against such a fee for constructing facilities on site or elsewhere in the City.
Goal PPS-4: Provide for utilities and infrastructure to deliver safe, reliable services for current and future residents and businesses.	Consistent. The applicant previously secured the required permits to address impacts to on-site drainages, including the flood control channel traversing the Project site. The site's master drainage and flood control improvements have been completed. In 2007, as contemplated by the 2005 Aquabella SPA, the Riverside County Flood Control and Water Conservation District completed drainage channel improvements, Line F, within the southeast portion of the Project site. In addition, the applicant has completed all required mitigation, pursuant to the applicable Section 404, 401, and 1602 permitting, for the Line F improvements. The installed concrete and earthen channel (and associated basin) are continually maintained in conformance with permit requirements. These improvements ensure that adequate storm drain system capacity is maintained. In addition, in 2011, as contemplated by the 2005 Aquabella SPA, Nason Street, which traverses the Project site, was realigned and widened to a four-lane divided roadway. Nason Street was a crucial capital improvement project for the City. In 2007, the applicant also obtained permits to drill and test two deep groundwater wells on the Project site pursuant to Riverside County Department of Health Permit No. 33248. Well No. 1 provides for pumping at a rate of 1,500 gpm and Well No. 2 at a rate of 450 gpm. This additional water source can and would be used in implementing and maintaining the Project's lake features. The Specific Plan Amendment (Appendix A) outlines the improvements that would be made to ensure that public water, sewer, drainage, and other backbone facilities needed for each Project phase are constructed prior to or concurrent with initial development within that phase. Prior to development of any phase of the Project, "will-serve" letters from utility providers would be required, demonstrating that

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	adequate water and sewer service capacity exists or would be available to serve the proposed development in a timely manner.
Policy PPS.4-2: Coordinate development activity with the provision of public infrastructure and services to eliminate possible gaps in service provision.	**Consistent.** The Specific Plan Amendment (Appendix A) outlines the improvements that would be made to ensure that public water, sewer, drainage, and other infrastructure facilities are timely constructed to prevent any possible gaps in service. Public service and utility improvements are addressed in SEIR Section 4.15, Public Services, and Section 4.19, Utilities and Services Systems.
Policy PPS.4-3: Prior to the approval of any new development application, continue to require "will serve" letters from utility providers demonstrating that adequate water and septic or sewer service capacity exists or will be available to serve the proposed development in a timely manner.	**Consistent.** Will-serve letters would be required of utility providers prior to each phase of development.
Policy PPS.4-4: Whenever possible, project proponents should ensure that public water, sewer, drainage, and other backbone facilities needed for a project phase are constructed prior to or concurrent with initial development within that phase. It shall be the ultimate responsibility of the sponsor of a development project to assure that all necessary infrastructure improvements (including system wide improvements) needed to support project development are available at the time that they are needed.	**Consistent.** The Specific Plan Amendment (Appendix A) outlines the improvements that would be made to ensure that public water, sewer, drainage, and other backbone facilities needed for each Project phase are constructed prior to or concurrent with initial development within that phase.
Policy PPS.4-6: Maintain a "dig once" policy to streamline the installation of infrastructure, minimize disruption from construction activities, and optimize coordination among responsible agencies and developers.	**Consistent.** Installation of infrastructure would be streamlined to the greatest extent to minimize disruption from construction activities and optimize coordination.
Safety Element	
Goal S-1: Protect life and property from natural and humanmade hazards.	**Consistent.** The Project is designed to protect life and property from natural and human-made hazards. The Project site is not located in a fire hazard severity zone or within an earthquake fault zone, and no known hazardous materials or contamination exists on the site. All structures at the site would be required to comply with the California Building Code, which would ensure structures are designed for seismic and fire safety. Development of structures intended for human occupancy would not occur within a 100-year floodplain unless a LOMR has been issued by FEMA prior to issuance of the certificate of occupancy. The street and storm drain flood control systems would be designed to accommodate 10-year and 100-year storm flows.

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Policy S.1-1: Continue to restrict the development of habitable structures within Alquist-Priolo Earthquake Fault Zones consistent with State law.	**Consistent.** The Project site is not located within an Alquist-Priolo Earthquake Fault Zone.
Policy S.1-4: Ensure that structures intended for human occupancy are designed and constructed to retain their structural integrity when subjected to seismic activity, in accordance with the California Building Code.	**Consistent.** All structures at the site would be required to comply with the California Building Code, which would ensure structures are designed for seismic safety and to retain their structural integrity when subjected to seismic activity. In addition, with the 1999 EIR, a geotechnical analysis was completed for the original SP 218 and recommendations were made to ensure geological safety. Mitigation was adopted requiring remedial grading to remove and recompact soils as directed by the geotechnical engineer.
Policy S.1-7: Design, construct and maintain street and storm drain flood control systems to accommodate 10-year and 100-year storm flows respectively, employing "green infrastructure" techniques as feasible and appropriate. The storm drain system shall conform to Riverside County Flood Control and Water Conservation District master drainage plans and the requirements of the Federal Emergency Management Agency.	**Consistent.** The site's master drainage and flood control improvements have been completed. In 2007, as contemplated by the 2005 Aquabella SPA, the Riverside County Flood Control and Water Conservation District completed drainage channel improvements, Line F, within the southeast portion of the Project site. In addition, the applicant has completed all required mitigation, pursuant to the applicable Section 404, 401 and 1602 permitting, for the Line F improvements. The installed concrete and earthen channel (and associated basin) are continually maintained in conformance with permit requirements. These improvements ensure that adequate storm drain system capacity is maintained. As proposed by the 2005 Aquabella SPA, the Project would also make use of the lake system for control of on-site stormwater runoff. The lakes would be constructed to provide improved stormwater quality, protect the groundwater and other drinking water supplies, and protect the downstream receiving waters. In order to accomplish this goal, the lakes would be designed as a stormwater BMP and include features such as biofilters, wetlands components, and aeration to improve the water quality and maintain the lake quality. They would be lined to minimize the amount of make-up water necessary to maintain the water level. Isolated portions of the lake system may be filled and/or maintained with tertiary-treated water obtained from EMWD. The lakes containing tertiary-treated water would retain water to the level of a 100-year storm.
Policy S.1-8: Permit in the 100-year floodplain only that development which represents an acceptable use of the land in relation to the hazards involved and the costs of providing flood control facilities. Locate critical facilities, such as hospitals, fire stations, police	**Consistent.** Since the original SP 218 and 2005 Aquabella SPA project approvals, approximately 65% of the Project site (including lakes) has been graded and conditional and final LOMRs have been issued by FEMA demonstrating that grading has raised certain areas planned for structures outside of

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stations, public administration buildings, and schools outside of flood hazard areas.	the 100-year floodplain. Prior to the construction of any habitable structure or critical facility within the current 100-year floodplain, the developer shall obtain a conditional LOMR from FEMA. Prior to the issuance of any permit to occupy habitable structures, the developer shall obtain a final LOMR or other such approval from FEMA that demonstrates that the structures are outside the 100-year flood plain.
Policy S.1-9: Encourage project designs that minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize best management practices (BMPs) to reduce stormwater runoff and minimize increases in downstream runoff resulting from new development.	**Consistent.** Extensive landscaped area would be provided on site within setbacks, the streetscape, open spaces and parks, and the lake promenade, maximizing pervious areas throughout the site. The majority of stormwater runoff would drain to the lakes, which would be designed as a stormwater BMP and include features such as biofilters, wetlands components, and aeration to improve the water quality and maintain the lake quality. This would minimize increases in downstream runoff resulting from the Project.
Policy S.1-10: Through development agreements and compliance with adopted master drainage plans and existing regulations, require that new development provide necessary storm drainage improvements and ensure that upstream stormwater generators fully address stormwater needs on their property.	**Consistent.** As discussed herein, master drainage improvements have already been completed to address stormwater needs. In 2007, as contemplated by the 2005 Aquabella SPA, the Riverside County Flood Control and Water Conservation District completed drainage channel improvements, Line F, within the southeast portion of the Project site. In addition, the applicant has completed all required mitigation, pursuant to the applicable Section 404, 401 and 1602 permitting, for the Line F improvements. The installed concrete and earthen channel (and associated basin) are continually maintained in conformance with permit requirements. These improvements ensure that adequate storm drain system capacity is maintained.
Policy S.1-22: Set new schools, housing, and care facilities a minimum of 100 feet back from high voltage power lines or substations.	**Consistent.** No high voltage power lines or substations are currently present on or within 100 feet of the Project site. The nearest aboveground power line is a 115 kV line owned by Southern California Edison located across from Vista del Lago High School at Margaret Ave. and Lasselle St. The City's municipal electric utility provides power to the area through existing underground 12 kV electrical lines. Underground electric utilities would be extended throughout the Project site from the intersections at Nason and Cactus, Oliver and John F. Kennedy, Morrison and Alessandro, and Iris and Nason.
Policy S.1-24: Regulate development on sites with known contamination of soil or groundwater to ensure that construction workers, future occupants, adjacent residents, and the environment are adequately	**Consistent.** A full study of potentially hazardous materials was previously prepared. Areas identified as potentially containing hazardous materials or contaminated soil or groundwater were treated in

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protected from hazards associated with contamination.	compliance with applicable regulation. Further, potential impacts related to hazardous materials associated with the implementation for this Project would be reduced by the mitigation measures included in Section 4.9, Hazards and Hazardous Materials, of this SEIR.
Policy S.1-25: Consistent with State regulations, require proper storage and disposal of hazardous materials to reduce the likelihood of leakage, explosions, or fire, and to properly contain potential spills from leaving the site.	**Consistent.** Any hazardous materials and waste associated with the property would be properly handled and stored in compliance with applicable federal, state, and local requirements regarding removal and disposal. Further, as a mixed-use residential development project, the development is not anticipated to require substantial storage or disposal of hazardous materials.
Goal S-2: Provide effective response to disasters and emergencies	**Consistent.** Police and fire services would be ensured through the condition that the Project make a fair share funding contribution to the City consistent with the City's Municipal Code and Fee Schedule, subject to any credits that may be given against such a fee for constructing facilities on site or elsewhere in the City. Payment of fees would support City efforts to provide sufficient fire, law enforcement, and first responder facilities and services. The police and fire department would participate in reviewing and commenting on the Specific Plan Amendment. Circulation at the site would provide appropriate connections, street widths, and turnaround circumference at any cul-de-sac or dead end to facilitate emergency vehicular access and safe evacuations. Development would comply with applicable federal, state, and local standards. The Project is also located adjacent to two major hospital campuses in the event of an emergency, further bolstering effective emergency and disaster response.
Policy S.2-6: Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for criminal activity and fire hazards and maximizes the potential for responsive police and fire services.	**Consistent.** The police and fire department would participate in reviewing and commenting on the Specific Plan Amendment. Fire hazards would be minimized through compliance with the California Building Code and Fire Code standards and development in this infill location. Fire safety related building standards would include, among numerous other requirements, fire sprinklers, fire resistance standards for fire doors, fire water flow requirements, fire hydrant spacing, and access road specifications. Project design and operation would minimize the potential for criminal activity by providing efficient, shielded lighting in appropriate locations throughout the community and installing appropriate signage. Payment of fair share funding to the City consistent with the City's Municipal Code and Fee Schedule,

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	subject to any credits, would ensure sufficient fire and law enforcement facilities and services.
Goal S-3: Build community resilience to climate change.	**Consistent.** By focusing development in an infill area and enhancing an efficient transit and alternative/electric transportation network adjacent to major employment centers, the proposed Project commits to reducing vehicular greenhouse gas emissions. The community would be developed using resilient materials including drought-tolerant landscaping and building materials that comply with the current California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which govern window and door materials, lighting, electrical panels, insulation, faucets, water use, electric vehicle charging, photo voltaic installation, and more. Compliance with Title 24 would significantly reduce energy demand, reduce the use of volatile organic compound–emitting materials, strengthen water conservation, and require construction waste recycling. Shade trees would be maintained throughout the site and in areas where people gather, throughout the site's lake promenade, parks, and open space. The lakes and lake promenade landscaping are anticipated provide a cooling effect in the nearby surrounding urban environment and negate urban heat island impacts. These project design features and materials, among others, would ensure the community is built to be resilient to climate change.
Policy S.3-6: Encourage the use of landscaping, building materials, and site design techniques that provide passive cooling and reduce energy demand. In particular, promote the use of voluntary measures identified in the California Green Building Code (Title 24, Part 11 of the California Code of Regulations) to minimize heat island effects, including hardscape and roof materials with beneficial solar reflectance and thermal emittance values and measures for exterior wall shading.	**Consistent.** The community would be developed using resilient materials including drought-tolerant landscaping and building materials that comply with the current California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which govern window and door materials, lighting, electrical panels, insulation, faucets, water use, EV charging, PV installation, and more. In addition, the Project would implement certain voluntary measures identified in the Green Building Code. Site selection and design of an infill project that incorporates mixed-use commercial, retail, restaurant, and recreational uses in an area served by two major medical centers would be consistent with voluntary 2022 Green Building Code measures related to site selection and community connectivity for all or a portion of the site. The lakes and lake promenade landscaping are anticipated to provide a cooling effect in the nearby surrounding urban environment and reduce urban heat island impacts. Trees and other planting would be used to shade sidewalks, patios,

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	driveways, and other paved areas. EV chargers and bicycle parking would be provided on site. Thus, landscaping, building materials, and site design techniques would provide passive cooling and reduce energy demand of the Project.
Policy S.3-7: Require new development to provide and maintain shade trees suitable to local climatic conditions. A climate-appropriate strategy may involve planting mostly drought-tolerant native trees that may have less foliage, interspersed with leafier trees at points where people gather.	**Consistent.** Shade trees would be planted throughout the site consistent with the landscape design. Leafier trees would be provided at points where people gather.
Policy S.3-8: Assess the feasibility of implementing urban heat island mitigation technologies in public gathering places, including UV-reflective materials and coatings, porous pavement, evaporative cooling towers, or other technologies that can reduce surface and air temperature and mitigate for the effects of extreme heat.	**Consistent.** The lakes and lake promenade landscaping are anticipated to provide a cooling effect in the nearby surrounding urban environment and reduce urban heat island impacts. Trees and other planting would be used to shade sidewalks, patios, driveways, and other paved areas to further reduce surface and air temperatures. Building materials would comply with California Building Energy Efficiency Standards. The Project would use light-colored, semi-reflective, or cool-roof technology for all roofing.
Noise Element	
Goal N-1: Design for a pleasant, healthy sound environment conducive to living and working.	**Consistent.** Located in a mostly residential infill area, the Project site is in an area with lower noise levels consistent with residential and the surrounding medical uses. The Project is not anticipated to be a major generator of stationary noise. Projected noise sources include predominantly construction, traffic, and equipment noise (e.g., air conditioners, landscape equipment). Noise reduction strategies would be employed during construction consistent with the City's noise ordinance, Municipal Code Section 11.80. As concluded in Section 4.13, Noise, of this SEIR, **MM-N-1**, **MM-N-2**, and **MM-N-3** would be implemented to reduce construction and traffic related noise levels and would reduce impacts to less than significant with mitigation. Alternative transportation strategies would be employed at the site to reduce traffic noise, including promoting biking and walking, transit, ride-share, and EVs. Site design, use of structures, and landscaping would be used to buffer outdoor uses from traffic noise. Interior noise levels at the site would meet City and state regulations, ensuring a healthy sound environment conducive to living and working.
Policy N.1-1: Protect occupants of existing and new buildings from exposure to excessive noise, particularly adjacent to freeways, major roadways, the railroad, and within areas of aircraft overflight.	**Consistent.** The Project site is not located within the noise contours of March Air Reserve Base and is not located adjacent to freeways or the railroad. Site design, use of structures, and landscaping would be used to buffer outdoor uses from traffic noise on the

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2040 General Plan Policies	Project Consistency
	adjacent major roadways (Nason Street, Iris Ave., Cactus Ave., and John F. Kennedy Drive.) Interior noise levels at the site would meet City and state regulations, ensuring a healthy sound environment conducive to living and working.
Policy N.1-2: Guide the location and design of transportation facilities, industrial uses, and other potential noise generators to minimize the effects of noise on adjacent land uses.	**Consistent.** The Project does not include industrial noise uses or other major potential noise generators. Roadway design and the location of transit facilities on site would be designed to minimize adverse effects to surrounding land uses.
Policy N.1-3: Apply the community noise compatibility standards (Table N-1) to all new development and major redevelopment projects outside the noise and safety compatibility zones established in the March Air Reserve Base/Inland Port Airport Land Use Compatibility (ALUC) Plan in order to protect against the adverse effects of noise exposure. Projects within the noise and safety compatibility zones are subject to the standards contained in the ALUC Plan.	**Consistent.** The Project site is not located within the noise contours of March Air Reserve Base. Future developments proposed under the Project would undergo site review during permitting to determine if a noise insulation study would be required to achieve compliance with Noise Element policies.
Policy N.1-4: Require a noise study and/or mitigation measures if applicable for all projects that would expose people to noise levels greater than the "normally acceptable" standard and for any other projects that are likely to generate noise in excess of these standards.	**Consistent.** A noise study was prepared that analyzed Project noise impacts and determined that impacts would be less than significant with the implementation of **MM-N-1** through **MM-N-3**. Interior noise levels at the site would meet City and state regulations (and comply with **MM-N-1** through **MM-N-3**); therefore, the Project would result in acceptable noise levels.
Policy N.1-5: Noise impacts should be controlled at the noise source where feasible, as opposed to at receptor end with measures to buffer, dampen, or actively cancel noise sources. Site design, building orientation, building design, hours of operation, and other techniques, for new developments deemed to be noise generators shall be used to control noise sources.	**Consistent.** The Project is not anticipated to be a major generator of stationary noise. Projected noise sources include predominantly construction, traffic, and equipment noise (e.g., air conditioners, landscape equipment). Noise reduction strategies would be employed during construction consistent with the City's noise ordinance, Municipal Code Section 11.80. Alternative transportation strategies would be employed at the site to reduce traffic noise, including promoting biking and walking, transit, ride-share, and EVs. Site design, use of structures and building orientation, and landscaping would be used to effectively buffer and dampen noise. Interior noise levels at the site would meet City and state regulations.
Policy N.1-6: Require noise buffering, dampening, or active cancellation, on rooftop or other outdoor mechanical equipment located near residences, parks, and other noise sensitive land uses.	**Consistent**. Outdoor mechanical equipment located near residences, parks, and other noise sensitive land uses would be screened by walls and/or landscaping, which would result in noise buffering. Refer to Chapters 5 and 6 of the Specific Plan Amendment (Appendix A).

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Policy N.1-7: Developers shall reduce the noise impacts on new development through appropriate means (e.g., double-paned or soundproof windows, setbacks, berming, and screening). Noise attenuation methods should avoid the use of visible sound walls where possible.	**Consistent.** Site design, use of structures and building orientation, and landscaping would be used to effectively buffer and dampen noise. Interior noise levels at the site would meet City and state regulations, including through the use of this buffering, mechanical ventilation system or air conditioning systems, and sound-rated windows. Visible sound walls would be avoided.
Goal N-2: Ensure that noise does not have a substantial, adverse effect on the quality of life in the community.	**Consistent.** The Project is not anticipated to be a major generator of stationary noise that would have an adverse effect on the quality of life in the community. Alternative transportation strategies would be employed to reduce traffic noise related to the Project, including promoting biking and walking, transit, ride-share, and EVs. Site design, use of structures and building orientation, and landscaping would be used to effectively buffer and dampen noise impacts to existing residents surrounding the site and for future residents of the Project.
Policy N.2-1: Use the development review process to proactively identify and address potential noise compatibility issues.	**Consistent.** The Project is not anticipated to be a major generator of stationary noise and its proposed residential mixed uses are anticipated to be compatible with the surrounding residential, school, and medical uses. A noise study was prepared through this development review process that analyzed Project noise impacts and determined that impacts would be less than significant with mitigation. Interior noise levels at the site would meet City and state regulations (and comply with proposed **MM-N-1** through **MM-N-3**).
Policy N.2-3: Limit the potential noise impacts of construction activities on surrounding land uses through noise regulations in the Municipal Code that address allowed days and hours of construction, types of work, construction equipment, and sound attenuation devices.	**Consistent.** Construction would comply with the City's Municipal Code, Section 11.80, which outlines limitations on construction activities and exceptions.
Environmental Justice Element	
Goal EJ-1: Reduce pollution exposure and improve community health.	**Consistent.** The Project site is not located adjacent to significant sources of toxic air contaminants. The Project would incorporate 80 acres of parks (the previously approved 40 acres of lakes, plus a 15-acre lake promenade feature and 25 acres of other additional parks), trees, landscaping, recreation, and other amenities to reduce pollutant exposure, encourage healthy activity, and improve community health. Residents and visitors would also benefit from Project adjacency to two major medical campuses.

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2040 General Plan Policies	Project Consistency
Policy EJ 1-1: Coordinate air quality planning efforts with other local, regional, and State agencies.	**Consistent.** A draft SEIR has been prepared for the proposed Project that evaluates its potential air quality impacts. The draft SEIR would be circulated to local, regional, and state agencies for review and public comment.
Policy EJ 1-3: Require new development that would locate sensitive uses adjacent to sources of toxic air contaminants (TAC) to be designed to minimize any potential health risks, consistent with State law.	**Consistent.** The Project site is not located adjacent to sources of toxic air contaminants.
Policy EJ 1-6: Ensure that construction and grading activities minimize short-term impacts to air quality by employing appropriate mitigation measures and best practices.	**Consistent.** The majority (approximately 65%) of the Project site (including lakes) has already been graded. Construction and grading activities would be required to comply with City and SCAQMD rules related to construction activities. Specifically, the Project would be required to comply with SCAQMD Rules 402 and 403, which relate to the prohibition of nuisances, watering of inactive and perimeter areas, and track out requirements. MM-AQ-2 requires that equipment meeting CARB Tier 4 Final standards be used to reduce diesel construction emissions.
Policy EJ 1-8: Support the incorporation of new technologies and design and construction techniques in new development that minimize pollution and its impacts.	**Consistent.** The majority (approximately 65%) of the Project site (including lakes) has already been graded. Construction and grading activities would be required to comply with City and SCAQMD rules related to construction activities including SCAQMD Rules 402 and 403, which relate to the prohibition of nuisances, watering of inactive and perimeter areas, and track out requirements. New technologies would be used in development; MM-AQ-2 requires that equipment meeting CARB Tier 4 Final standards be used to reduce diesel construction emissions. In terms of design techniques minimizing pollution during operation, the community would be developed using resilient materials including drought-tolerant landscaping and building materials that comply with the current California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which govern window and door materials, lighting, electrical panels, insulation, faucets, water use, EV charging, PV installation, and more. Compliance with Title 24 would significantly reduce energy demand, reduce the use of volatile organic compound–emitting materials, strengthen water conservation, and require construction waste recycling.
Policy EJ.1-10: Coordinate with water service providers to ensure that sources of potable water are protected from contamination.	**Consistent.** EMWD would provide the Project with both potable water for domestic use and reclaimed (tertiary-treated) water for irrigation and isolated segments of the lakes, thereby minimizing reliance on groundwater resources. On-site wells may provide

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2040 General Plan Policies	Project Consistency
	water to assist in filling and maintaining some or all of the lake features. Well No. 1 provides for pumping at a rate of 1,500 gpm and Well No. 2 at a rate of 450 gpm. Application of reclaimed water to open space areas would recharge the groundwater basin. Coordination with EMWD would occur prior to each phase of development and implementation of related infrastructure.
Policy EJ.1-12: Encourage use of cost-effective residential water filtration systems, providing information on product options and effectiveness on the City website.	**Consistent.** Tap water provided by EMWD is in compliance with federal health-based drinking water standards.
Policy EJ.1-13: Through the development review process, ensure that hazardous material-affected soil, groundwater, or buildings will not have the potential to adversely affect the environment or the health and safety of site occupants.	**Consistent.** A full study of potentially hazardous materials was previously prepared and indicated the site is uncontaminated by hazards/ hazardous materials.
Goal EJ-2: Provide safe and sanitary housing for Moreno Valley residents of all ages, abilities, and income levels.	**Consistent.** The Project envisions a vibrant new housing development of 15,000 homes in a variety of housing types, including garden style stacked flats, row townhomes, duplex homes, attached courtyard homes, and housing available to seniors and students to meet the needs of residents of all ages and abilities and a variety of income levels.
Policy EJ.2-1: Continue to work with developers to expand Moreno Valley's affordable housing stock, including a range of housing types that meets the needs of seniors, large and small families, low- and middle-income households, and people with disabilities.	**Consistent.** The Project would develop 15,000 units, which would increase the housing stock in the City. The multifamily housing options provided by the Project would include housing affordable and available to seniors, large and small families, low- and middle-income households, and people with disabilities. Given that the City's current housing primarily consists of single-family units, the proposed multifamily residents will provide a more affordable option compared to the current housing stock. These provided multifamily options supply the growing demand for walkable urban living and a diverse range of housing options along a spectrum of affordability, including duplexes, fourplexes, courtyard apartments, row townhomes, multi-level garden apartments, and live/work homes.
Policy EJ.2-2: Promote mixed-income development and the inclusion of affordable housing units throughout the city.	**Consistent.** Varied housing types provided by the Project would provide housing for residents of varying income levels.
Goal EJ-3: Expand access to high-quality, fresh and healthy food.	**Consistent.** Restaurants in the site's mixed-use Town Center would provide high-quality, fresh, and healthy food options among other opportunities to work, recreate, and shop. Retail food stores and grocery stores are a permitted use, and therefore commercial

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	development on the Project site could include a food market, which would support Project site residents.
Policy EJ.3-1: Promote the equitable distribution of healthy food retail and dining options throughout the city.	**Consistent.** By expanding the availability of healthy food retail and dining options in this underserved area of the City, the proposed Project promotes the equitable distribution of healthy food.
Policy EJ.3-2: Encourage the development of healthy food outlets, small neighborhood markets, farmers' markets, and food cooperatives in/near homes by adopting flexible zoning standards to allow such uses where appropriate. Consider creation of a Healthy Food Zoning Overlay and allowing small-scale urban agriculture in specified areas of the city and as accessory uses, such as temporary on-site urban agriculture stands.	**Consistent.** The Project's Town Center hub and recreational areas would provide opportunities for small neighborhood markets and farmers' markets.
Goal EJ-4: Encourage the active participation of local residents and businesses in civic life.	**Consistent.** Focusing new residential, mixed-use development on currently undeveloped land in the City's Downtown Center would provide vibrant gathering places, diversify the local economy, and provide a place where people can live, work, recreate, shop, and gather to participate and engage in the local community and civic life.
Healthy Communities Element	
Goal HC-1: Promote the health and well-being of those who live, work, and play in Moreno Valley.	**Consistent.** The health and well-being of those who live, work, and play in Moreno Valley would be promoted through the creation of a flexible land use plan that provides for homes, a mixed use commercial hub, schools, parks (including the lake and promenade), open space, and a public facilities and services framework within the center of the City.
Policy HC.1-3: Promote access to a diverse array of health services.	**Consistent.** Proximate to two major health campuses (Riverside University Health System Medical Center and Kaiser Permanente Hospital), the proposed Project promotes access to a diverse array of health services. The 300-room hotel on site would provide an additional opportunity for medical tourism, where patients and visitors may come to also access health services at these facilities. Further, medical offices are a permitted commercial use within the Project site.
Policy HC.1-5: Promote broad awareness of the recreation opportunities offered in Moreno Valley. Provide recreation programs in a variety of locations to make participation convenient.	**Consistent.** The Project would create integrated lake, lake promenade, parks, and schools features and implement a pedestrian-friendly, bicycle, and multi-use trails network to provide welcoming and vibrant gathering places for the City's residents and visitors. Appropriate signage would be installed on site in a variety of locations.
Policy HC.1-6: Promote walking and bicycling as a safe and convenient mode of transportation.	**Consistent.** The Project would implement a pedestrian-friendly, bicycle, and multi-use trails network, including the lake promenade, which would

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	promote walking and bicycling as a safe and convenient mode of transportation. Bike lanes and shared streets would be incorporated through the Project site to complement the new and existing development in a way that promotes the human scale. These bike lanes would connect to existing Class II bike lanes on Cactus Ave., Nason Street, Iris Ave., Lasselle Street, and John F. Kennedy Dr.
Goal HC-2: Engage community members and community partners in efforts to create a healthier Moreno Valley.	**Consistent.** The Specific Plan Amendment represented the collaborative design vision of land use and design, marketing, and engineering professionals, together within input from agencies, residents, and the community at large. The resulting Project reflects the effort to create a healthier Moreno Valley through encouraging walking, biking, recreational activities, and socializing; providing food and dining options; reducing commute times by locating homes proximate to job centers; supporting the adjacent health care systems; and promoting environmental sustainability.
Policy HC.2-2: Create "People Places" such as public plazas with seating, art, and play features near shopping and business districts. Promote public spaces that foster positive human interaction and healthy lifestyles.	**Consistent.** The lake, lake promenade, Town Center, and parks would provide the predominant "People Places" on site. The lakefront would provide a location for restaurants adjacent to the water, and the lake would incorporate fountain features and entertainment to make the most of stunning lakefront views. The lake promenade would provide a continuous trail and walkway around the lake and would include amenities such as stylized gardens, follies, amphitheaters, bandstands, picnic areas, cafes, kiosks, canoe and kayak rentals, piers, and a concierge comfort facility. Public art would also be incorporated into the area surrounding the lake and within the Town Center. The Town Center would be designed to provide gathering places adjacent to the restaurants, cafes, boulangerie-patisserie, shopping, and other businesses. Major gathering areas would also be provided within parks. Parks throughout the site would include lawns for passive and active recreation, game courts, shaded children's play facilities, group shade structures, family picnic/cooking facilities, landscaping, and other amenities including restroom facilities. Mixed uses and residential areas would also foster social interaction through incorporating courtyards, patios, balconies, and other features.
Policy HC.2-3: Encourage development and display of public art to promote the history, heritage, culture and contemporary identity of Moreno Valley.	**Consistent.** Garden design, public art, and heritage trees incorporated into the Project would celebrate and promote the history of Moreno Valley. The lake would

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	also feature vistas to San Gorgonio Mountain, paying appropriate tribute to a distinguishing City view.
Policy HC.2-4: Provide recreation programs responding to the diverse interests, needs, ages and cultural backgrounds of Moreno Valley residents.	**Consistent.** Diverse recreation would be facilitated by the Project's lake and lake promenade, extensive trail and walkway system, public parks and open space, and public and private recreational amenities. Recreational activities would include activities such as walking, biking/e-biking, riding scooters, swimming, boating, kayaking and canoeing, paddle-boarding, sports, picnicking, meditation, playground activities, yoga, and private recreational amenities (e.g., gyms, rock climbing). The diverse interests, needs, ages, and cultural backgrounds of Moreno Valley residents would be met.
Policy HC.2-5: Expand opportunities for residents to volunteer their time and talents to contribute to community health and quality of life. Expand opportunities for interaction between community members, elected officials, commission members, and City staff and for partnerships between the City and community groups that revolve around making Moreno Valley a healthier place for all residents. Expand opportunities for residents to socially connect across generations and cultures at the neighborhood level and citywide.	**Consistent.** As discussed in the response to Policy HC.2-2, the Project would provide numerous opportunities for interaction between community members. The Project also allows for the development of civic uses and hosting of civic activities on site, which would allow for additional community interaction across generations and cultures and with elected and appointed officials.
Policy HC.2-6: Provide and encourage community events that promote cultural understanding and a shared sense of pride in Moreno Valley.	**Consistent.** The lake, lake promenade, Town Center, and parks would provide large gathering places and piazzas on site that may host community events. The lakefront would incorporate amphitheaters and bandstands. The Town Center would be designed to provide gather places adjacent to the restaurants, cafes, shopping, and other businesses. Major gather areas would also be provided within parks, including cooking areas and group shade structures. The site would play host to festivals and other public and community events, which would promote cultural understanding and a shared sense of pride in the City.
Policy HC.2-7: Focus on youth engagement (28.7 percent of city's population is under 18 years-old).	**Consistent.** The numerous recreational and entertainment amenities provided at the site would engage area youth. Youth would be able to take advantage of recreational activities such as walking, biking/e-biking, riding scooters, swimming, boating, kayaking and canoeing, paddle-boarding, sports, picnicking, playground activities, yoga, and private recreational amenities (e.g., gyms, rock climbing). Entertainment would also engage youth, including the lake's fountain and entertainment features, festivals, and other events that may be hosted at the site.

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Goal HC-3: Promote a variety of businesses that help support community health.	**Consistent.** Proximate to two major health campuses (Riverside University Health System Medical Center and Kaiser Permanente Hospital), the proposed Project promotes access to a diverse array of health services. The 25 acres of commercial uses on site would provide an additional opportunity for medical tourism, where patients and visitors may come to also access health services at these facilities. Restaurants, retail, and recreational opportunities would be available at the Project site for its residents and surrounding residents and workers, supporting community health. In addition, medical office uses are permitted at the Project site.
Policy HC.3-3: Support high-quality affordable and convenient access to a full range of traditional and alternative primary, preventive, emergency, and specialty health care options.	**Consistent.** The Project site provides convenient resident and visitor access to the Riverside University Health System Medical Center and Kaiser Permanente Hospital, which provide a range of traditional and alternative primary, preventive, emergency, and specialty health care options. In addition, medical office uses are permitted at the Project site.
Policy HC.3-4: Encourage new public facilities, schools, parks, recreational facilities and commercial, office, and medical buildings to provide drinking fountains and reusable water bottle filling stations.	**Consistent**. Schools, parks, recreational, and commercial facilities would provide drinking fountains and reusable water bottle filling stations.
Policy HC.3-6: Encourage equitable distribution of healthy food retail and dining options in all commercial and employment areas of Moreno Valley.	**Consistent.** The Project would expand the availability of healthy food retail and dining options proximate to several commercial and employment centers, including Riverside University Health System Medical Center, Kaiser Permanente Hospital, Moreno Valley College, and the World Logistics Center. Retail food stores and grocery stores are a permitted use, and therefore commercial development on the Project site could include a food market, which would support Project site residents.
Open Space and Resource Conservation Element	
Goal OSRC-1: Preserve, protect, and enhance natural resources, habitats, and watersheds in Moreno Valley and the surrounding area, promoting responsible management practices.	**Consistent.** Most of the Project site consists of graded, disturbed land that does not contain natural resources, habitat area, or naturally occurring watersheds. The Project would create resources on site by providing 80 acres of parks, composed of the previously approved 40 acres of lakes, a 15-acre lake promenade feature, and 25 acres of other additional parks and recreation facilities. The lake ecosystem would serve to help support avian and other species. Adjacent to the southeast portion of the Project site, the Line F drainage channel—which includes both a concrete and earthen channel, as well as previously enhanced habitat area—would be preserved. The

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	applicant previously completed all required mitigation for the Line F channel pursuant to the applicable Section 404, 401, and 1602 permitting. This area is continually maintained in conformance with prior permit requirements.
Policy OSRC.1-3: Maximize public access to natural resource areas where appropriate, to enhance environmental awareness and provide recreational opportunities.	**Consistent.** Most of the Project site consists of graded, disturbed land that does not contain natural resources, habitat area, or naturally occurring watersheds. The Project would create resources on site by providing 80 acres of parks, composed of the previously approved 40 acres of lakes, a 15-acre lake promenade feature, and 25 acres of other additional parks and recreation facilities. The lake complex would provide for recreational activities (boating, swimming, kayaking, canoeing), provide recycled water for irrigation, provide aesthetic value for the community, and help to support avian and other species. Adjacent to the southeast portion of the Project site, the Line F drainage channel—which includes both a concrete and earthen channel, as well as previously enhanced habitat area—would be preserved.
Policy OSRC.1-5: Design stormwater detention basins as multi-use amenities providing recreation, aesthetic value, and wildlife habitat along with flood control.	**Consistent.** As proposed by the 2005 Aquabella SPA, the Project would make use of the lake complex for control of on-site stormwater runoff. The lakes would be constructed to provide improved stormwater quality, protect the groundwater and other drinking water supplies, and protect the downstream receiving waters. In order to accomplish this goal, the lakes would be designed as a stormwater BMP and include features such as biofilters, wetlands components, and aeration to improve the water quality and maintain the lake quality. The lakes would be lined to minimize the amount of make-up water necessary to maintain the water level. The lake complex would provide this stormwater detention value while also being used for recreational activities (boating, swimming, kayaking, canoeing), providing recycled water for irrigation, providing aesthetic value for the community, and helping to support avian and other species.
Policy OSRC.1-7: Require that grading plans include appropriate and feasible measures to minimize erosion, sedimentation, wind erosion and fugitive dust. Particularly in hillside areas, new roadways and trails should follow natural contours to minimize grading.	**Consistent.** A significant portion of the site (65%) has already been graded subject to erosion control requirements. The site does not include hillside areas. As the Project is implemented, it would adhere to public agency requirements regarding erosion control through final grading plans, erosion control plans, stormwater pollution prevention plans, and water quality management plans that have been reviewed and approved by the respective agencies. Grading would also be subject to SCAQMD and City

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	regulations, including SCAQMD's Rule 403 regarding control of fugitive dust.
Policy OSRC.1-8: Cooperate with federal, State, and local regulatory agencies as well as non-profit organizations to promote the responsible stewardship of natural resources and habitats within the planning area.	**Consistent.** Most of the Project site consists of graded, disturbed land that does not contain natural resources, habitat area, or naturally occurring watersheds. A qualified biologist has conducted on-site surveys and made recommendations, as necessary, regarding treatment of on-site habitat areas and species. Regarding the small pocket of habitat on the ungraded eastern portion of the Project site, adjacent to the Line F drainage channel, the Project proposes to preserve this habitat as open space. The Project would cooperate with the appropriate agencies and organizations in complying with applicable laws and regulations, including the County Multiple Species Habitat Conservation Plan and in obtaining any applicable permits (e.g., Sections 404, 401)
Policy OSRC.1-9: Ensure that adverse impacts on sensitive biological resources, sensitive natural communities, sensitive habitat, and wetlands are avoided or mitigated to the greatest extent feasible as development takes place.	**Consistent.** Most of the Project site consists of graded, disturbed land that does not contain natural resources, habitat area, or naturally occurring watersheds. A qualified biologist has conducted on-site surveys and made recommendations, as necessary, regarding treatment of on-site habitat areas and species. Regarding the small pocket of habitat on the ungraded eastern portion of the Project site, adjacent to the Line F drainage channel, the Project proposes to avoid development of this habitat and preserve this as open space.
Policy OSRC.1-10: In areas where development (including trails or other improvements) has the potential for adverse effects on special status species, require project proponents to submit a study conducted by a qualified professional that identifies the presence or absence of special-status species at the proposed development site. If special-status species are determined to be present, require incorporation of appropriate mitigation measures as part of the proposed development prior to final approval.	**Consistent.** A qualified biologist has conducted on-site surveys and made recommendations, as necessary, regarding treatment of on-site habitat areas and species. As detailed therein, most of the Project site consists of graded, disturbed land where no special-status species are present.
Policy OSRC.1-11: Require all development, including roads, proposed adjacent to riparian and other biologically sensitive habitats to mitigate impacts to such areas.	**Consistent.** A qualified biologist has conducted on-site surveys and made recommendations, as necessary, regarding treatment of on-site habitat areas and species. As detailed therein, most of the Project site consists of graded, disturbed land where no special-status species are present. Mitigation has been incorporated to minimize the impacts of development adjacent to biologically sensitive areas.
Policy OSRC.1-14: Coordinate with public and private entities to link regional open spaces with a network of	**Consistent.** The Project's trail system and bike lanes would connect the on-site residential, retail, restaurant, recreational, hotel, school, community

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paths and trails, including connections to Moreno Valley's Multi-Use Trail System.	facilities, and other uses with off-site communities and regional open spaces. Residents and visitors would be able to connect to improved trails along Cactus Avenue to the east, as well as to the scenic Lake Perris State Recreation Area south of the site, via sidewalks, trails, and bike paths, in order to take advantage of its myriad recreational activities, including camping, picnicking, fishing, swimming, water sports, hiking, equestrian, and boating uses.
Policy OSRC.1-15: Expand the City's network of multi-use trails and provide connections from residential and commercial areas within the city to surrounding hillsides, ridgelines, open spaces and other scenic areas.	**Consistent.** The Project's trail system and bike lanes would connect the on-site residential and commercial areas to scenic areas and open spaces. The on-site lake promenade would provide a scenic multi-use trail for future residents and visitors alike within the site. Connections off site extend to the Lake Perris State Recreation Area.
Policy OSRC.1-16: Provide sufficient resources for the maintenance of trails and staging areas through a combination of grant funding, city resources, and volunteer efforts.	**Consistent.** Funding for the maintenance of trails and staging areas provided by the Project would be assured through compliance with performance standards requiring adequate financing concurrent with each development phase. Financing would occur via the funding mechanisms set forth in the Specific Plan Section 7.3.7, Financing and Maintenance of Improvements.
Policy OSRC.1-17: Continue to participate in regional efforts to proactively manage surface and groundwater resources and ensure their long-term health and viability, including the development and implementation of the San Jacinto Groundwater Basin Groundwater Sustainability Plan (Basin Plan).	**Consistent**. The West San Jacinto Basin Groundwater Sustainability Plan has confirmed that the Moreno Valley area is not currently in overdraft, and groundwater water levels have increased in the area since the 1970s. EMWD would provide the Project with potable water for domestic use and recycled (tertiary-treated) water for irrigation and isolated segments of the lakes, thereby minimizing reliance on groundwater resources. On-site wells may provide water to assist in filling and maintaining some or all of the lake features. Well No. 1 provides for pumping at a rate of 1,500 gpm and Well No. 2 at a rate of 450 gpm. This additional water source can and would be used in implementing and maintaining the Project's lake features. Water management would also be assured through numerous conservation practices. Water would be conserved on site through the use of native and drought-tolerant plants in landscaping. Compliance with Title 24 building standards would significantly strengthen water conservation as well. In addition, through the implementation of sophisticated BMPs, the lakes would act to treat and store runoff on site, conserving water resources that would otherwise be wasted and promoting the health of the groundwater basin. These

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	actions would proactively assist in management of both surface and groundwater resources.
Policy OSRC.1-18: Preserve natural drainage courses in their natural state to the extent feasible.	**Consistent.** Most of the Project site consists of graded, disturbed land that does not contain natural drainage courses. The small area of drainage on the ungraded eastern portion of the Project site, adjacent to the Line F drainage channel, would be preserved as-is. In the area outside of the Project boundary in the southeast portion of the site and as contemplated by the 2005 Aquabella SPA, the Riverside County Flood Control and Water Conservation District completed drainage channel improvements to ensure that adequate storm drain system capacity is maintained. The applicant has completed all required mitigation, pursuant to the applicable Section 404, 401, and 1602 permitting, for these Line F improvements. The improvements include both an installed concrete and earthen channel (and associated earthen basin), which are continually maintained in conformance with permit requirements. The Project does not propose to alter this drainage.
Policy OSRC.1-19: Maximize the amount of pervious surfaces in public spaces to permit the percolation of urban runoff while implementing best practices for stormwater pollution prevention.	**Consistent.** Extensive landscaped area would be provided on site within setbacks, the streetscape, open spaces and parks, and the lake promenade, providing pervious areas throughout the site. The majority of stormwater runoff would drain to the lakes, which would be designed as a stormwater BMP and include features such as biofilters, wetlands components, and aeration to improve the water quality and maintain the lake quality. This would limit increases in downstream runoff resulting from the Project.
Policy OSRC.1-20: Facilitate groundwater recharge in Moreno Valley by encouraging development projects to use Low Impact Development (LID) practices such as bioretention, porous paving, and rainwater harvesting systems, and by encouraging private property owners to design or retrofit landscaped or impervious areas to better capture storm water runoff.	**Consistent.** Groundwater recharge would be encouraged through the use of LID development practices including bioretention, porous paving, and limiting impervious areas. In addition, through the implementation of sophisticated BMPs, the lakes would act to treat and store runoff on site, conserving water resources that would otherwise be wasted and minimizing off-site drainage. EMWD would also provide the Project with reclaimed (tertiary-treated) water for irrigation and isolated segments of the lakes. Application of this reclaimed water to open space areas would help to recharge the groundwater basin.
Policy OSRC.1-21: Continue to regulate new commercial and industrial activities as well as construction and demolition practices to minimize discharge of pollutants and sedimentation into the stormwater drainage system.	**Consistent.** A significant portion of the site (65%) has already been graded subject to erosion control and stormwater sedimentation requirements. As the Project is implemented, it would adhere to public agency requirements through compliance with stormwater pollution prevention plans and water

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
	quality management plans that have been reviewed and approved by the respective agencies. During Project operation, street and storm drain flood control systems would be designed to accommodate 10-year and 100-year storm flows. As proposed by the 2005 Aquabella SPA, the Project would make use of the lake complex for control of on-site stormwater runoff. The lakes would be constructed to provide improved stormwater quality, protect the groundwater and other drinking water supplies, and protect the downstream receiving waters. In order to accomplish this goal, the lakes would be designed as a stormwater BMP and include features such as biofilters, wetlands components, and aeration to improve the water quality and maintain the lake quality. The lakes would be lined to minimize the amount of make-up water necessary to maintain the water level. Isolated portions of the lake system may be filled and/or maintained with tertiary-treated water obtained from EMWD. The lakes containing tertiary-treated water would retain water to the level of a 100-year storm.
Policy OSRC.1-22: Allow new development to use individual wells only where an adequate supply of good quality groundwater is available.	**Consistent.** EMWD would provide the Project with both potable water for domestic use and reclaimed (tertiary-treated) water for irrigation and isolated segments of the lakes, thereby minimizing reliance on groundwater resources. On-site wells may provide water to assist in filling and maintaining some or all of the lake features. In 2007, the applicant obtained permits to drill and test two deep groundwater wells on the Project site pursuant to Riverside County Department of Health Permit No. 33248. Well No. 1 provides for pumping at a rate of 1,500 gpm and Well No. 2 at a rate of 450 gpm. This additional water source can and would be used in implementing and maintaining the Project's lake features. The West San Jacinto Basin Groundwater Sustainability Plan has confirmed that the Moreno Valley area is not currently in overdraft, and groundwater water levels have increased in the area since the 1970s.
Goal OSRC-2: Preserve and respect Moreno Valley's unique cultural and scenic resources, recognizing their contribution to local character and sense of place.	**Consistent.** A full study of potential cultural resources was prepared and indicated there are no known archaeological, historical, cultural sites, or significant features on the site and that the potential for significant cultural resources occurring on the property is low. The site is currently graded and undeveloped, surrounded by a chain link fence. Scenic resources would be preserved by developing complementary to adjacent uses and providing attractive architecture, gateway entry points, parks

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
	and open space, and the distinctive lake system to create a sense of place.
Policy OSRC.2-4: Reduce or avoid visual intrusion from energy and telecommunications infrastructure. Encourage the undergrounding of utility lines wherever feasible and promote the use of "stealth" designs that locate wireless infrastructure on existing poles, buildings and other structures.	**Consistent.** Energy and telecommunications infrastructure would be provided underground.
Policy OSRC.2-8: Require cultural resource assessments prior to the approval of development proposals on properties located in archaeologically sensitive areas.	**Consistent.** A full study of potential cultural resources was prepared and indicated there are no known archaeological, historical, cultural sites, or significant features on the site and that the potential for significant cultural resources occurring on the property is low.
Goal OSRC-3: Use energy and water wisely and promote reduced consumption.	**Consistent.** The community would be developed consistent with current California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which ensure the Project uses energy and water in an efficient and non-wasteful manner.
Policy OSRC.3-1: Promote energy conservation throughout the community and encourage the use of renewable energy systems and technologies to supplement or replace traditional building energy systems.	**Consistent.** The Project would be developed consistent with current California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which govern window and door materials, lighting, electrical panels, insulation, faucets, water use, EV charging, PV installation, and more. Compliance with Title 24 addresses solar PV renewable energy systems and would significantly reduce energy demand, reduce the use of volatile organic compound–emitting materials, strengthen water conservation, and require construction waste recycling.
Policy OSRC.3-6: Encourage new development to incorporate as many water-wise practices as feasible in their design and construction.	**Consistent.** As described in the landscaping plan, drought tolerant, sustainable landscaping would be professionally maintained throughout the development. Water efficient infrastructure and irrigation would be used throughout the development. The Project would comply with the current California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which govern water use and strengthen water conservation.
Policy OSRC.3-7: Conserve water through the provision of water-efficient infrastructure, drought tolerant plantings, and greywater usage to support public parks and landscaped areas.	**Consistent.** Drought-tolerant, sustainable landscaping would be professionally maintained throughout the development. Water efficient infrastructure and irrigation would be used throughout the development.
Policy OSRC.3-8: Conserve water through the planting and maintenance of trees, which will provide for the capture of precipitation and runoff to recharge	**Consistent.** Shade trees would be planted throughout the site.

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
groundwater, in addition to providing shading for other landscaping to reduce irrigation requirements. Ensure that any 'community greening' projects utilize water-efficient landscape.	
Goal OSRC-4: Optimize the use of available resources by encouraging residents, businesses and visitors to reuse and recycle.	**Consistent.** Through its partnership with Waste Management, the franchise hauler, the City provides an array of programs and tools intended to support statewide waste reduction objectives. The hauler and City staff promote recycling programs through billing inserts, flyers, social media postings, site visits, and outreach to the various businesses and organizations. Moreover, the City takes proactive steps to ensure compliance with AB 341 and/or AB 1826 requirements. The Project would not inhibit implementation of these programs and would be required to comply with the City's Municipal Code regarding solid waste and recyclable material storage areas (Municipal Code, Section 6.02.050).
Policy OSRC.4-1: Reduce the amount of solid waste disposed in landfills by promoting source reduction and recycling throughout Moreno Valley and by expanding the range of programs and information available to local residents and businesses, consistent with State requirements.	**Consistent.** Waste Management and City programs promote recycling and solid waste reduction. The Project would be required to comply with the City's Municipal Code regarding solid waste and recyclable material storage areas (Municipal Code, Section 6.02.050).
Policy OSRC.4-2: Strive to reduce at source, recycle, or compost 75 percent of solid waste generated in the community from the year 2021 forward, consistent with State targets.	**Consistent.** The Project would be required to comply with the City's Municipal Code regarding solid waste and recyclable material storage areas (Municipal Code, Section 6.02.050). Additionally, the City's Building Code requires development projects to complete and submit a Waste Management and Recycling Plan for approval prior to issuance of building permits. The Waste Management and Recycling Plan would identify the project type and estimate the amount of materials to be recycled during construction. Through compliance with applicable regulations, the Project would strive to meet this objective.
Housing Element	
Goal #1: Availability of a wide range of housing by location, type of unit, and price to meet the existing and future needs of Moreno Valley residents.	**Consistent.** A diverse range of housing options would be provided with the Project, including garden style stacked flats, row townhomes, duplex homes, attached courtyard homes, and housing available to seniors and students. The Project is complementary to and compatible with the mostly single-family, for-sale units surrounding the site. This balanced range of housing types would meet the current and changing needs of City residents.

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
Policy 1-1: Maintain sufficient land designated and appropriately zoned for housing to achieve a complimentary mix of single-family and multi-family development to accommodate Moreno Valley's Regional Housing Needs Assessment (RHNA) growth needs throughout the planning period.	**Consistent.** The Project site has been designated for residential mixed-use development since approval of the original SP 218 in 1999. The Project would build out this site designated for mixed-use residential with 15,000 multifamily homes to support and accommodate the City's RHNA growth needs. Estimated to be built out over 12–15 years, the Project would assist the City in meeting its 6th Cycle RHNA allocation, as well as future housing needs.
Policy 1-2: Promote development that provides a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate services and recognition of environmental constraints.	**Consistent.** A diverse range of housing options would be provided with the Project, including garden style stacked flats, row townhomes, duplex homes, attached courtyard homes, and housing available to seniors and students. The Project site is suitable for such development. It is located in an infill area that is mostly already graded for development. Major infrastructure improvements have already been completed. The site is within existing service areas for utilities, and the Project would ensure adequate services are provided prior to implementation of each phase of development. There are no major environmental constraints that would preclude the development on this site.
Policy 1-3: Promote mixed use developments with a residential component and locate higher density residential development in proximity to employment, shopping, transit, recreation, and other services.	**Consistent.** The Project is a mixed use development that would include 15,000 multifamily and workforce housing units; a 25-acre mixed-use commercial and retail Town Center; 80 acres of parks, composed of the previously approved 40-acre lake, a 15-acre lake promenade, and an additional 25 acres of parks; 40 acres of schools with up to three elementary school sites and one middle school site; public services and facilities; infrastructure improvements; and other amenities. The Project site is proximate to major job centers in the City and region, including Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, and the World Logistics Center. The Lake Perris State Recreation Area, composed of approximately 8,800 acres of open space and recreation, is approximately 0.5 miles south of the Project site. Locally servicing commercial/retail uses are also found in the Project area. The Project is located along major transit routes. The RTA provides existing bus routes proximate to the site. Route 31 runs along Nason Street to the Riverside University Medical Center. Route 20 also serves the site along Alessandro, Nason, and Moreno Beach Dr. to Riverside University Medical Center, Kaiser Permanente

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
	Hospital, and Moreno Valley College, as well as along Nason and Lasselle Street. Route 41 serves the site from the Medical Center to Moreno Valley College and areas to the south. Route 20 bus service also connect passengers to the Moreno Valley/March Field Metrolink Station across I-215.
Policy 1-6: Promote the construction of housing suitable for students near and in areas with good access to higher educational institutions, including Moreno Valley College.	**Consistent.** Located 1 mile from Moreno Valley College and 8 miles from UCR, the Project would provide a range of multifamily residential rental housing options that would be suitable for students.
Goal #2: Suitable and affordable housing for persons with special needs, including housing for lower income households, large families, single parent households, the disabled, and senior citizens and shelter for the homeless.	**Consistent.** The Project proposes a variety of multifamily housing options that would include housing naturally affordable and available to seniors, large and small families, low- and middle-income households, and people with disabilities. Given that the City's current housing primarily consists of single-family units, the proposed multifamily residents will provide a more affordable option compared to the current housing stock. These provided multifamily options supply the growing demand for walkable urban living and a diverse range of housing options along a spectrum of affordability, including duplexes, fourplexes, courtyard apartments, row townhomes, multi-level garden apartments, and live/work homes.
Policy 2-1: Support innovative public, private, and non-profit efforts in the development of affordable housing, particularly for the special needs groups.	**Consistent.** This innovative, mixed-use Project proposes a variety of multifamily housing options that would include housing naturally affordable and available to seniors, large and small families, low- and middle-income households, and people with disabilities.
Policy 2-2: Continue to encourage the development of rental units with three or more bedrooms to provide affordable housing for large families.	**Consistent.** The Project would develop a variety of rental housing types and floorplans, including units of three bedrooms or more.
Policy 2-3: Work with non-profit agencies and private sector developers to encourage the development of senior housing.	**Consistent.** While not specifically limited to seniors, the multifamily housing options provided by the Project would include housing naturally affordable and available to seniors and adaptable for conversion for use by seniors and/or those with disabilities.
Policy 2-4: Encourage the development of residential units which are accessible to persons with disabilities or are adaptable for conversion to residential use by persons with disabilities.	**Consistent.** The multifamily housing options provided by the Project would include housing naturally affordable and available to seniors, large and small families, low- and middle-income households, and people with disabilities. Given that the City's current housing primarily consists of single-family units, the proposed multifamily residents will provide a more affordable option compared to the current housing stock. These provided multifamily options supply the growing demand for walkable urban living and a diverse range of housing options along a spectrum of affordability, including duplexes, fourplexes, courtyard

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
	apartments, row townhomes, multi-level garden apartments, and live/work homes.
Goal #3: Removal or mitigation of constraints to the maintenance, improvement, and development of affordable housing, where appropriate and legally possible.	**Consistent.** The Project plans for a variety of multifamily housing to meet the changing needs of area residents and families and promote housing naturally affordable to the area's workforce. Approval of the Project would mitigate current constraints to such housing that plan for significantly fewer and more expensive, single-family homes on the site.
Policy 3-4: Ensure that water and sewer providers are aware of the City's intentions for residential development throughout the City.	**Consistent.** Will-serve letters would be required of utility providers prior to each phase of development.
Goal #5: Enhanced quality of existing residential neighborhoods in Moreno Valley, through maintenance and preservation, while minimizing displacement impacts.	**Consistent.** The Project would develop an attractive, mixed-use residential community on an undeveloped infill site in a manner complementary to and compatible with the existing residential neighborhoods surrounding the site. No displacement would occur.
Policy 5-1: Work to preserve property values, correct housing deficiencies, bring substandard units into compliance with City codes, and improve overall housing conditions in Moreno Valley.	**Consistent.** The proposed landmark Town Center and surrounding residential community would preserve and increase property values in the surrounding area by providing a destination for future residents, current residents, and visitors to live, work, play, and shop. The Project would improve overall housing conditions in the City by providing 15,000 additional multifamily units in a variety of types to accommodate diverse housing needs. Housing may include garden style stacked flats, row townhomes, duplex homes, attached courtyard homes, and housing available to seniors and students. The Project would assist the City in meeting its 6th Cycle RHNA allocation, as well as future housing needs.
Policy 5-3: Encourage compatible design of new residential units to minimize the impact of intensified reuse of residential land on existing residential development	**Consistent.** The Project would develop an attractive, mixed-use residential community on an undeveloped infill site in a manner complementary to and compatible with the existing residential neighborhoods surrounding the site. The mixed-use area and densest housing would be located in the north-center portion of the site, furthest from the existing single-family residences. Multifamily residential housing on the site would be designed to be compatible with the surrounding area through architecture and design, sizing, landscaping, parks/open space, and other means.
Goal #6: Proactive energy conservation and waste reduction activities in all residential neighborhoods.	**Consistent.** The Project would be developed using resilient materials including drought-tolerant landscaping and building materials that comply with the current California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which govern window and door materials, lighting, electrical panels, insulation,

Table 4.11-1. 2040 General Plan Land Use Consistency

2040 General Plan Policies	Project Consistency
	faucets, water use, EV charging, PV installation, and more. Compliance with Title 24 would significantly reduce energy demand, reduce the use of volatile organic compound–emitting materials, strengthen water conservation, and require construction waste recycling.
Policy 6-2: Encourage the incorporation of energy conservation design features in existing and future residential developments to conserve resources and reduce housing costs.	**Consistent.** Compliance with California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6) would conserve natural resources and energy and reduce energy use by future residents, which may result in cost reductions.
Policy 6-3: Encourage the use of building placement, design, and construction techniques that promote energy conservation, including green building practices, the use of recycled materials, and the recycling of construction and demolition debris. Solar panels will be required to be consistent with the ALUC Plan.	**Consistent.** The Project would comply with the California Green Building Code (Title 24, Part 11) and California Building Energy Efficiency Standards (Title 24, Part 6), which govern window and door materials, lighting, electrical panels, insulation, faucets, water use, EV charging, PV installation, and more. Compliance with Title 24 would significantly reduce energy demand, reduce the use of volatile organic compound–emitting materials, strengthen water conservation, and require construction waste recycling. Solar panels are designed to absorb light and would be coated with anti-reflective materials to maximize light absorption, minimizing any issues with glare.
Goal #7: Equal housing opportunity for all residents of Moreno Valley, regardless of race, religion, sex, marital status, ancestry, national origin, color, or handicap.	**Consistent.** Development within the Project site would comply with all requirements of law relating to providing equal housing opportunities.
Policy 7-3: Diversify and expand the housing stock in Moreno Valley in order to better accommodate the varied housing needs of current and future residents.	**Consistent.** A diverse range of housing options along a spectrum of affordability would be provided within the proposed 15,000 multifamily housing units to accommodate varied housing needs of current and future residents. Housing types could include style stacked flats, row townhomes, duplex homes, attached courtyard homes, and housing available to seniors and students. The Project is complementary to and compatible with the mostly single-family, for-sale units surrounding the site.
Policy 7-4: Avoid the over-concentration of housing constructed expressly for lower income households in any single portion of any neighborhood.	**Consistent.** The Project would provide 15,000 multifamily and workforce housing options for all ages and income levels. Diverse housing options would be integrated and interconnected to the community and would not concentrate lower income households in any single portion of any neighborhood.

Note: UCR = University of California, Riverside; GPA = General Plan Amendment; VMT = vehicle miles traveled; RTA = Riverside Transit Agency; I = Interstate; RHNA = Regional Housing Needs Assessment; ALUCP = Airport Land Use Compatibility Plan; du/ac = dwelling unit per acre; EV = electric vehicle; BMP = best management practice; LOS = level of service; NPDES = National Pollutant Discharge Elimination System; DIF = development impact fee; CNEL = community noise equivalent level; gpm = gallons per minute; LOMR = letter of map revision; FEMA = Federal Emergency Management Agency; EMWD = Eastern Municipal Water District; kV = kilovolt; PV = photovoltaic; SCAQMD = South Coast Air Quality Management District; CARB = California Air Resources Board; AB = Assembly Bill.

While the Project includes a General Plan Amendment for one parcel on site, as shown in Table 4.11-1, the Project would be consistent with the goals and policies within the City's 2040 General Plan. Therefore, the Project would not result in a significant environmental impact due to a conflict with the City's 2040 General Plan goals and policies.[3] Impacts would be **less than significant**.

Zoning and Municipal Code

As described in Section 4.11.1 above, the existing zoning of the central Project site is Downtown Center - Specific Plan (DC-SP), SP 218, while the 10-acre parcel along the eastern boundary of the Project site is currently zoned Residential 5 (R5). A Zone Change is proposed to rezone the 10-acre parcel to Downtown Center - Specific Plan (DC-SP), SP 218. The Project aligns with the DC-SP zoning where it seeks to provide a mix of residential, business, cultural, civic, and other uses to serve as a focal point for the City and region, and where the Specific Plan Amendment is proposed to implement the Project.

The Project would be developed consistent with the development regulations set forth in the Specific Plan Amendment (Appendix A). The Project proposes the development of 15,000 units, which will be the maximum dwelling units allowed at the site. The Project would also include the maximum square footage of commercial development of 49,900 square feet of commercial space. Development with the Open Space (OS) land use shall be pursuant to the OS district standards within Section 9.06, Open Space District, of the Moreno Valley Municipal Code. The Specific Plan Design Guidelines (included in Chapter 6 of the Specific Plan) complement the Development Regulations and will be referred to prior to submittal of any development application. The Specific Plan Amendment ensures quality design, provides for the creation of open space and circulation, and avoids or mitigates adverse environmental effects.

In the event of a conflict between the provisions of the Specific Plan Amendment and the regulations found in Title 9, Planning and Zoning (Zoning Ordinance), of the Moreno Valley Municipal Code, the provisions of the Specific Plan Amendment shall prevail. The Moreno Valley Municipal Code shall supplant any standard or regulation not explicitly covered by this Specific Plan Amendment. Some minor deviations from the development standards of the Specific Plan would be required to receive approval from the Community Development Director or designee. Approval would be contingent on the determination that the minor deviations do not exceed the following:

A. Building/landscape setback reduction of no more than 10% of the minimum required setback area
B. Fence or wall height increase of no more than 10% of the maximum allowable fence or wall height
C. Projections into required setback of no more than 10% of the minimum required setback area
D. Non-residential and residential building height increase of no more than 10% of the maximum allowable building height
E. Reduction in off-street parking spaces for non-residential uses of no more than 10% of the minimum required parking spaces
F. Decrease in the required distance between buildings of no more than 10% of the minimum required separation distance, but in no event shall the separation be less than 10 feet unless otherwise permitted under this Specific Plan Amendment

[3] The Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with the 2006 General Plan and demonstrates the Project would not result in a significant environmental impact due to a conflict with that prior Plan.

G. Deviation in area, height, setbacks, or separation of signs on residential and non-residential property of no more than 10% of the maximum allowable area or height or the minimum required setback or separation, and deviations of no more than 10% of any other allowable or required specifications applicable to signs
H. Deviations from similar development standards that do not exceed 10%
I. Realignment or modification of internal easement locations, grading adjustments, and/or neighborhood streets
J. Deviations as may be required from time-to-time by state law (e.g., under the state density bonus law)

In conclusion, the Project would be generally consistent with the Zoning and Municipal Code. While the Project may request minor deviations from the Specific Plan Development Standards, these deviations would not result in a significant environmental effect. Impacts would be **less than significant**.

Climate Action Plan

This Project does not tier from or rely on the City's CAP. Instead, a full GHG impact analysis for the Project was conducted in Section 4.8, Greenhouse Gas Emissions, pursuant to alternative GHG emissions impact thresholds. Accordingly, no significance conclusion regarding the Project's consistency with the CAP is needed or required. . Nonetheless, the Project's consistency with the City's Climate Action Plan (CAP) is analyzed in Section 4.8, Greenhouse Gas Emissions. As discussed in Section 4.8, the Project would not be consistent with the growth projections considered by the City's CAP because it would require a General Plan Amendment to allow for an increase in residential units at the site compared to what is currently allowed per the City's General Plan land use designations, which would result in greater GHG emissions than currently planned. Regarding the project-level CAP measures, the Project would be consistent with most, but not all, of the required measures prior to mitigation. With implementation of **MM-AQ-2** and **MM-AQ-4**, the Project would be consistent with all required project-level GHG reduction measures identified in the City's CAP checklist. The Project would also be consistent with applicable voluntary project-level CAP GHG reduction measures prior to the incorporation of mitigation.

Per item 1 of the CAP Checklist, if the Project is not consistent with the 2040 General Plan land use or zoning designations and would result in greater GHG emissions when compared to the existing designations, the applicant must conduct a full GHG impact analysis for the project as part of the CEQA process, including mitigation. A full GHG analysis has been prepared for the Project. See Section 4.8, Greenhouse Gas Emissions.

Multiple Species Habitat Conservation Plan

As discussed in Section 4.4, Biological Resources, the entire Project site is within the Western Riverside County MSHCP Area, As such, proposed development of the Project site must comply with all relevant measures of the MSHCP as presented in Volume I, Chapter 6.0 (Riverside County Transportation and Land Management Agency 2003). Please see Section 4.4 for a detailed discussion of consistency with the Western Riverside County MSHCP. Therefore, the Project would not conflict with the provisions of this MSHCP, and, as such, impacts would **be less than significant**.

Airport Land Use Compatibility Plan

The Project site is located outside the influence area for March Air Reserve Base/Inland Port Airport and therefore the compatibility criteria of the March Airport Land Use Compatibility Plan do not apply. The Project site is, however, within the FAA Part 77 Military Outer Horizontal Surface Limits Zone, meaning it may trigger necessary FAA notification to ensure that proposed structures do not affect navigable airspace if such structures exceed 200 feet

above ground level or may otherwise impact the safety of navigable airspace. The Project would not include any structures over 200 feet tall and would not require FAA notification. If Project details change during implementation and structures over 200 feet or other elements that may otherwise impact the safety of navigable airspace are proposed, the Applicant would engage in FAA Part 77 notification as required by law. Because the Project would comply with all applicable laws and regulations regarding airport land use, impacts would be **less than significant**.

RTP/SCS

The SCAG 2020–2045 RTP/SCS is a regional growth management strategy that targets per-capita GHG reduction from passenger vehicles and light trucks in the southern California region pursuant to SB 375. In addition to demonstrating the region's ability to attain the GHG emission-reduction targets set forth by CARB, the 2020-2045 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. As discussed in Section 4.17.5.2 of this SEIR, the Project would be generally consistent with the policy framework and goals of the adopted RTP/SCS, Connect SoCal 2020. Connect SoCal also incorporates local land use projections and circulation networks in city and county general plans. Because the Project is approximately 12,078 units more than what is currently programmed in the RTP/SCS within the Project site boundary, and because the major cumulative project in its vicinity—World Logistics Center—is not included in its entirety within the current RTP/SCS, the Project's consistency with the current RTP/SCS was evaluated in a Horizon Year VMT analysis. The results of the Horizon Year analysis indicated a less than significant VMT impact. Further, as discussed in Section 4.8.4.2, the Project would be consistent with the applicable RTP/SCS strategies.

As also discussed in Section 4.8.4.2, SCAG has released its draft 2024-2050 RTP/SCS, "Connect SoCal 2024"; however, the draft has not been adopted or approved at this time. CEQA does not require consideration of draft plans.

Therefore, through consistency with Connect SoCal policies and because the Project would not significantly impact Horizon Year VMT analyzed in the RTP/SCS, the Project impact related to consistency with SCAG's Connect SoCal would be **less than significant.**

4.11.5 Significance of Impacts Before Mitigation

Threshold 1: Physically Divide an Established Community

The Project would not result in the division of an existing community; impacts would be **less than significant.**

Threshold 2: Conflict with Any Land Use Plan, Policy, or Regulation

The Project and was determined to be consistent with the City's 2040 General Plan goals and policies and all applicable local and regional plans. Impacts would be **less than significant.**

4.11.6 Mitigation Measures

4.11.6.1 Previously Adopted Mitigation Measures

1999 EIR

No feasible mitigation was identified.

2003 Supplemental EIR

No feasible mitigation was identified.

2005 Addendum

No feasible mitigation was identified.

4.11.6.2 Project Mitigation Measures – 2024 Subsequent EIR

The Project did not identify any new impacts related to land use and planning, and impacts would be less than significant. No mitigation is required.

4.11.7 Significance of Impacts after Mitigation

Threshold 1: Physically Divide an Established Community

The Project would have **less than significant** impacts related to land use and no mitigation is required. Impacts would remain less than significant.

Threshold 2: Conflict with Any Land Use Plan, Policy, or Regulation

The Project would have **less than significant** impacts related to land use and no mitigation is required. Impacts would remain less than significant.

4.12 Mineral Resources

This section describes the existing mineral resource conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and the 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). While the 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR) did not specifically address mineral resources (City of Moreno Valley 1999b), the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum) found that the prior approved 2005 Aquabella SPA would result in less than significant impacts related to mineral resources (City of Moreno Valley 2005b). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) did not discuss impacts to mineral resources.

This section is based on data available from the California Department of Conservation, the City of Moreno Valley General Plan 2040 (2040 General Plan), and the Final EIR for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan (2040 General Plan EIR).

4.12.1 Existing Environmental Conditions

As mandated by the Surface Mining and Reclamation Act of 1975 (SMARA), the California State Mining and Geology Board (SMGB) classifies California mineral resources with the Mineral Resource Zones (MRZs) system. These zones have been established based on the presence or absence of significant sand and gravel deposits and crushed rock source areas (i.e., products used in the production of cement). The classification system emphasizes Portland cement concrete aggregate, which is subject to a series of specifications to ensure the manufacture of strong, durable concrete. The following guidelines are presented in SMARA's mineral land classification for the Project region (DOC 2021a):

- **MRZ-1** – Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2** – Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that there is a high likelihood for their presence.
- **MRZ-3** – Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- **MRZ-4** – Areas where available information is inadequate for assignment to any other MRZ.

SMGB has designated significant aggregate resources within the San Bernardino Production-Consumption Region, which includes the City of Moreno Valley (City) and other portions of Riverside and San Bernardino Counties. The region is characterized based on the identification of active aggregate operations (Production) and the market area served (Consumption).

According to the California Department of Conservation mineral resources mapping and the MRZs map as shown in the 2040 General Plan EIR, no land on site is designated as a significant mineral resource area (MRZ-2). The Project site is located on land designated MRZ-3, with a small portion of the Project site in the south located on

MRZ-1 (City of Moreno Valley 2021a))[1]. The MRZ-1 classification pertains to land where adequate geologic information indicates that no significant mineral deposits are present. MRZ-3 are those areas containing mineral deposits whose significance cannot be evaluated from available data.

Within the City, there are no active mineral resource extraction facilities. The City's 2040 General Plan land use map does not delineate any mineral resource recovery site, and no land in the City is designated for mineral resource production (City of Moreno Valley 2021b). The nearest land designated for mineral resources is in the unincorporated County of Riverside, approximately 7 to 8 miles east of the Project site within the Reche Canyon/Badlands Subarea.

There are no oil or gas wells on the Project site, in the Project vicinity, or in the City.

4.12.2 Regulatory Framework

Federal

There are no federal policies or regulations related to mineral resources that apply to the proposed Project.

State

Surface Mining and Reclamation Act of 1975

SMARA is the primary regulator of onshore surface mining in the state. As mandated by SMARA, the State Geologist (California Geological Survey) identifies all mineral deposits within the state and SMGB identifies any MRZs (i.e., MRZ-1 through MRZ-4) present. The distinctions between MRZ-1 through MRZ-4 are detailed in Section 4.12.1.

SMARA delegates specific regulatory authority to local jurisdictions. Local jurisdictions are required to enact specific procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans. A particular concern of state legislators in enacting SMARA was the premature loss of minerals and protection of sites threatened by development practices that might preclude future mineral extraction. Thus, Sections 2762 and 2763 of SMARA require that prior to permitting a use that would threaten the potential to extract minerals in an area designated as containing significant mineral deposits, a jurisdiction must issue a Statement of Reasons to approve a proposed project. If required, the Statement of Reasons must be submitted to the State Geologist and SMGB for review in conjunction with the environmental review.

California Geological Survey Mineral Resources Project

The California Geological Survey Mineral Resources Project provides information about California's nonfuel mineral resources. The Mineral Resources Project classifies lands throughout the state that contain regionally significant mineral resources as mandated by SMARA. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate including sand, gravel, and crushed stone. Development generally results in a demand for minerals, especially construction aggregate. SMARA requires all cities and counties in the state to incorporate in their general plans the mapped MRZ designations approved by the SMGB. The classification

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

process involves the determination of P-C region boundaries based on identification of active aggregate operations (Production) and the market area served (Consumption). The P-C regional boundaries are modified to include only those portions of the region that are urbanized or urbanizing and are classified for their aggregate content.

California Geologic Energy Management Division

The California Geologic Energy Management Division (CalGEM), formerly the Division of Oil, Gas, and Geothermal Resources, oversees the drilling, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells, while working to help California achieve its climate change and clean energy goals. CalGEM regulates the drilling, operation, and permanent closure of energy resource wells (DOC 2023a).

California Department of Conservation Idle Well Program

Inactive and deserted oil and gas wells that are not maintained (i.e., "idle wells") can pose threats to groundwater and public safety (DOC 2023b). In April 2019, CalGEM revised its idle well regulations to create more stringent testing requirements that better protect public safety and the environment from the potential threats posed by idle wells. The regulations require idle wells to be tested and, if necessary, repaired or permanently sealed and closed. If an operator becomes insolvent or deserts their idle wells, responsibility for permanently sealing and closing these wells may fall to the state. Since 1977, CalGEM has plugged and abandoned about 1,400 wells at a cost of $29.5 million (DOC 2023b). To reduce the number of idle wells for which the state may become responsible, legislative and regulatory changes have been made to create incentives for operators to manage and eliminate their idle wells by entering into idle well management plans. If an operator does not have an idle well management plan, the operator must pay annual idle well fees. In 2018, CalGEM collected approximately $4.3 million in idle well fees (DOC 2023b). These fees are deposited into the Hazardous and Idle-Deserted Well Abatement Fund to help fund the permanent sealing and closure of deserted wells (DOC 2023b).

Local

City of Moreno Valley General Plan

The 2040 General Plan does not delineate any mineral resource recovery site, does not designate land for mineral resource production, and does not contain specific objectives and policies related to extraction of mineral deposits/mining. (City of Moreno Valley 2021b).

4.12.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to mineral resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to mineral resources would occur if the Project would:

1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

4.12.4 Impact Analysis

4.12.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR did not discuss impacts to mineral resources because it was not an environmental issue identified by the CEQA Guidelines when the analysis was prepared.

Mitigation

No mitigation was identified.

2003 Supplemental EIR

Analysis

Mineral resources was not one of the issue areas that was included in the 2003 Supplemental EIR because it specifically addressed traffic, biological mitigation, land use, and alternatives.

Mitigation

No mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum concluded that the site did not represent a significant source of mineral resources and that impacts to mineral resources would be less than significant.

Mitigation

No mitigation was identified.

4.12.4.2 Project Impact Analysis

Threshold 1: Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

As discussed in Section 4.12.1, there are no active mineral resource extraction facilities in the City, at the Project site, or in the Project vicinity. The 2040 General Plan land use maps do not delineate any mineral resource recovery sites or land designated for mineral resource production in the City or at the Project site. According to the MRZs map in the 2040 General Plan EIR, the Project site is located on land designated MRZ-3, with a small portion of the Project site in the south designated MRZ-1 (City of Moreno Valley 2021a), which does not indicate the presence of known significant mineral resources at the Project site. Additionally, there are no oil or gas wells at the Project site,

in the City, or in the Project vicinity (DOC 2023c). Therefore, as with the prior project approvals, due to the lack of any known significant mineral resources that would be of value to the region and the residents of the state, the current Project would not result in the loss of availability of a known mineral resource. There would be **no impact**.

Threshold 2: Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

As described in Threshold 1, above, there are no mineral recovery sites or mineral resource production sites in the City, at the Project site, or in the Project vicinity. The Project site is not identified as a significant resource recovery site in the 2040 General Plan or the 2040 General Plan EIR. The 2040 General Plan does not discuss mineral resources because there are generally no significant mineral resources within the City. As such, there are no known significant mineral resources present on the Project site, the Project site is not within an important mineral resource recovery zone (MRZ-2), and there are no producing oil resources on the Project site. Therefore, as with the prior project approvals, the current Project would not result in a loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plans. There would be **no impact**.

4.12.5 Significance of Impacts Before Mitigation

Threshold 1: Loss of Availability of a Known Mineral Resource

No impact would occur to mineral resources.

Threshold 2: Loss of Availability of a Locally Important Mineral Resource

No impact would occur to mineral resources.

4.12.6 Mitigation Measures

4.12.6.1 Previously Adopted Mitigation Measures

1999 EIR

No mitigation measures were identified.

2003 Supplemental EIR

This topic was not included in the 2003 Supplemental EIR.

2005 Addendum

No mitigation measures were identified.

4.12.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

No mitigation measures would be required.

4.12.7 Significance of Impacts after Mitigation

Threshold 1: Loss of Availability of a Known Mineral Resource

No impact would occur to mineral resources.

Threshold 2: Loss of Availability of a Locally Important Mineral Resource

No impact would occur to mineral resources.

4.13 Noise

This section describes the existing noise conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in less than significant impacts related to noise (City of Moreno Valley 1999b, 2003, 2005b).

The following analysis of the Project's potential impacts related to noise and vibration is based predominantly on the Noise Technical Report prepared by Dudek for the Project site (Appendix I of this Subsequent EIR).

4.13.1 Existing Environmental Conditions

The City of Moreno Valley (City) is subject to typical urban and suburban noises, such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities. Noise around the Project site is the cumulative effect of noise from transportation activities and stationary sources. "Transportation noise" typically refers to noise from automobile use, trucking, airport operations, and rail operations. "Stationary noise" typically refers to noise from sources such as heating, ventilation, and air-conditioning (HVAC) systems; compressors; landscape maintenance equipment; or machinery associated with local industrial or commercial activities.

The Project site is primarily subject to traffic noise associated with Iris Avenue to the south and secondarily to traffic noise from Oliver Street, which is approximately 600 feet east of the Project site.

Sound may be described in terms of level or amplitude (measured in decibels [dB]), frequency or pitch (measured in hertz or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech interference, sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and local agencies have established criteria to protect public health and safety, to prevent disruption of certain human activities, and to minimize annoyance.

Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise. These descriptors include the equivalent noise level over a given period (L_{eq}), the day–night average noise level (L_{dn}), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA.

L_{eq} is a sound energy level averaged over a specified time period (usually 1 hour). L_{eq} is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L_{eq} measurement would represent the average amount of energy contained in all the noise that occurred in that 1 hour. L_{eq} is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors. L_{max} is the greatest sound level measured during a designated time interval or event.

Unlike the L_{eq} metric, L_{dn} and CNEL metrics always represent 24-hour periods, usually on an annualized basis. L_{dn} and CNEL also differ from L_{eq} because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that L_{dn} and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m.–7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m.–10:00 p.m.) is penalized by adding 5 dB, while nighttime (10:00 p.m.–7:00 a.m.) noise is penalized by adding 10 dB. L_{dn} differs from CNEL in that the daytime period is defined as 7:00 a.m.–10:00 p.m., thus eliminating the evening period. L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 to 1 dB.

Table 4.13-1 represents some typical noise levels found in the existing environment. Noise-sensitive uses near the Project site include residential uses, an elementary school, child care centers, and a park.

Table 4.13-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
—	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kph (50 mph)	80	Food blender at 1 meter (3 feet) Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area Heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quiet urban daytime	50	Large business office Dishwasher, next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural night time	20	Bedroom at night, concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013.
Notes: kph = kilometers per hour; mph = miles per hour

Ambient Noise Measurements

Noise measurements were conducted on and near the Project site in May 2023 to determine the existing noise levels. Table 4.13-2 provides the location, date, and time the noise measurements were taken.

The noise measurements were made using a Rion NL-52 (Serial Number 00553896) equipped with a 0.5-inch, pre-polarized condenser microphone with pre-amplifier. The sound level meter meets the current ANSI standard for a Type 2 precision sound level meter. The sound level meter was calibrated before and after the measurements, and the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

Seven noise measurement locations that represented nearby potential sensitive receptors or sensitive land uses were selected adjacent to or near the Project site; these locations are depicted as Short-Term (ST) 1 through ST7 on Figure 4.13-1, Noise Measurement and Modeling Locations. Location ST1 was on the north side of Cactus Avenue next to the parking gate of Riverside University Healthy System Medical Center, 26520 Cactus Avenue, Moreno Valley, California 92555. ST2 was at the northwest corner of Delphinium Ave and Lasselle Street. ST3 was taken on the south side of Casa Encanto Road at 26341 Casa Encanto Road, Moreno Valley, California 92555. ST4 was at the east side of Avenida Fiesta in front of the residential house at 15336 Avenida Fiesta, Moreno Valley, California 92555. ST5 was located at the northeast corner of Nason Street and Iris Avenue. ST6 was located at the south side of Delphinium Avenue across the street from 27070 Delphinium Avenue, Moreno Valley, California 92555. ST7 was taken on the southeast corner of Nason Street and Damascus Road. The measured average noise levels and measurement locations are provided in Table 4.13-2. The primary noise source at ST1, ST2, ST5, ST6, and ST7 was from traffic along the adjacent roads. The primary noise source at ST3 and ST4 was from rustling leaves and occasional traffic on driveways.

Table 4.13-2. Measured Outdoor Ambient Noise Levels

Receptors	Location/Address	Date	Time	L_{eq} (dBA)	L_{max} (dBA)
ST1	26520 Cactus Avenue, Moreno Valley, California, 92555	May 16, 2023	11:06 a.m.–11:21 a.m.	70.1	82.7
ST2	Northwest corner of Delphinium Ave and Lasselle Street	May 16, 2023	12:14 p.m.–12:28 p.m.	71.3	95.7
ST3	26341 Casa Encanto Road, Moreno Valley, California 92555	May 16, 2023	11:55 a.m.–12:10 p.m.	52.8	73.1
ST4	15336 Avenida Fiesta, Moreno Valley, California 92555	May 16, 2023	10:28 a.m.–10:43 a.m.	44.7	63
ST5	Northeast corner of Nason Street and Iris Avenue.	May 16, 2023	11:32 a.m.–11:47 a.m.	71.2	93.6
ST6	South side of Delphinium Avenue across the street from the property 27070 Delphinium Avenue, Moreno Valley, California 92555	May 16, 2023	11:13 a.m.–11:28 a.m.	48.6	63.8
ST7	Southeast corner of Nason Street and Damascus Road	May 16, 2023	10:55 a.m.–11:10 a.m.	65.9	81

Notes: L_{eq} = equivalent continuous sound level (time-averaged sound level); dBA = A-weighted decibel. L_{max} = maximum sound level during the measurement interval.

4.13.2 Regulatory Framework

Federal

Federal Transit Administration

In its Transit Noise and Vibration Impact Assessment guidance manual, the Federal Transit Administration (FTA) recommends a daytime construction noise level threshold of 80 dBA L_{eq} over an 8-hour period when detailed construction noise assessments are performed to evaluate potential impacts to community residences surrounding a project (FTA 2018). Although this FTA guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the state and local jurisdictional levels. The FTA identifies a construction-related vibration damage threshold of 0.3 inches per second (ips) peak particle velocity (PPV) for typical residential structures (0.12 ips PPV for fragile historic structures).

Federal Interagency Committee on Noise

For the assessment of transportation noise impacts, significance thresholds developed by the Federal Interagency Committee On Noise (FICON) are typically employed. FICON specifies a maximum allowable increase in noise level (using CNEL) that is dependent upon the starting ambient noise level. Under FICON recommended criteria (FICON 1992), as existing ambient noise increases, the threshold for increase in noise exposure due to a project is reduced. Table 4.13-3 illustrates the FICON criteria considered when evaluating traffic noise generated by a project. If sensitive receptors (i.e., residences) would be exposed to long-term traffic noise increases exceeding these criteria, impacts may be considered significant.

Table 4.13-3. Significance of Changes in Roadway Noise Exposure

Existing Noise Exposure (dBA CNEL)	Allowable Noise Exposure Increase/Significance Threshold (dBA CNEL)
Less than 60	5
60–65	3
Greater than 65	1

Source: FICON 1992.
Notes: dBA = A-weighted decibel; CNEL = community noise equivalent level.

State

California Department of Transportation Vibration Standards

The California Department of Transportation (Caltrans) conducted extensive research on human annoyance and damage to structures caused by vibration from short-term construction activities and from long-term highway operations. These criteria established by Caltrans are commonly used to assess vibration impacts from all types of projects and activities. Caltrans uses a threshold of 0.2 ips PPV for annoyance to persons, where a continuous vibration source is involved; for transient sources (represented by construction activities), Caltrans uses a threshold of 0.24 ips PPV (which equates to a distinctly perceptible level). For commercial buildings constructed of concrete and steel, Caltrans identifies a damage threshold of 0.5 ips PPV. For residential structures employing concrete foundation and wood frame construction, Caltrans identifies a conservative damage threshold vibration level standard of 0.3 ips PPV (Caltrans 2020).

California Code of Regulations – Title 24

Title 24 of the California Code of Regulations sets standards that new development in California must meet. According to Title 24, interior noise levels are not to exceed 45 dBA CNEL in any habitable room of a residential structure.

California Department of Health Services

California Department of Health Services has developed guidelines of community noise acceptability for use by local agencies, which have been published by the Governor's Office of Planning and Research (OPR 2017) as the Land Use Compatibility for Community Noise Environments Matrix. Selected relevant levels are listed here:

- Below 60 dBA CNEL: normally acceptable for low-density residential use
- 50 to 70 dBA: conditionally acceptable for low-density residential use
- Below 65 dBA CNEL: normally acceptable for high-density residential use and transient lodging
- 60 to 70 dBA CNEL: conditionally acceptable for high-density residential, transient lodging, churches, educational, and medical facilities

Local

City of Moreno Valley General Plan 2040

The City has incorporated the Land Use Compatibility for Community Noise Environments Matrix (OPR 2017) in the Noise Element of the City of Moreno Valley General Plan 2040 as their exterior noise exposure guidelines for each land use category (City of Moreno Valley 2021). Future developments proposed under the Project would undergo site review during permitting to determine if a noise insulation study would be required to achieve compliance with Noise Element policies. The following Moreno General Plan Noise Element policies are relevant to the Project (City of Moreno Valley 2021)[1]:

Goal N-1: Design for a pleasant, healthy sound environment conducive to living and working.

Policy N.1-1: Protect occupants of existing and new buildings from exposure to excessive noise, particularly adjacent to freeways, major roadways, the railroad, and within areas of aircraft overflight.

Policy N.1-2: Guide the location and design of transportation facilities, industrial uses, and other potential noise generators to minimize the effects of noise on adjacent land uses.

Policy N.1-3: Apply the community noise compatibility standards (Table N-1) to all new development and major redevelopment projects outside the noise and safety compatibility zones established in the

[1] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

March Air Reserve Base/Inland Port Airport Land Use Compatibility (ALUC) Plan in order to protect against the adverse effects of noise exposure. Projects within the noise and safety compatibility zones are subject to the standards contained in the ALUC Plan.

Policy N.1-4: Require a noise study and/or mitigation measures if applicable for all projects that would expose people to noise levels greater than the "normally acceptable" standard and for any other projects that are likely to generate noise in excess of these standards.

Policy N.1-5: Noise impacts should be controlled at the noise source where feasible, as opposed to at receptor end with measures to buffer, dampen, or actively cancel noise sources. Site design, building orientation, building design, hours of operation, and other techniques, for new developments deemed to be noise generators shall be used to control noise sources.

Policy N.1-6: Require noise buffering, dampening, or active cancellation, on rooftop or other outdoor mechanical equipment located near residences, parks, and other noise sensitive land uses.

Policy N.1-7: Developers shall reduce the noise impacts on new development through appropriate means (e.g., double-paned or soundproof windows, setbacks, berming, and screening). Noise attenuation methods should avoid the use of visible sound walls where possible.

Goal N-2: Ensure that noise does not have a substantial, adverse effect on the quality of life in the community.

Policy N.2-1: Use the development review process to proactively identify and address potential noise compatibility issues.

Policy N.2-3: Limit the potential noise impacts of construction activities on surrounding land uses through noise regulations in the Municipal Code that address allowed days and hours of construction, types of work, construction equipment, and sound attenuation devices.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

City of Moreno Valley Noise Ordinance

The Noise Ordinance included in Chapter 11.80 of the Moreno Valley Municipal Code provides performance standards and noise control guidelines for operational activities and for construction activities, as described below.

Operational Noise Standards

Moreno Valley Municipal Code Section 11.80.030.C, Non-Impulsive Sound Decibel Limits, provides the following restriction:

> No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any non-impulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if

> the sound occurs on public right-of-way, public space or other publicly owned property. Any source of sound in violation of this subsection shall be deemed prima facie to be a noise disturbance.

For industrial and commercial land uses, based on the commercial land use standard of Moreno Valley Municipal Code Table 11.80.030-2, the operational noise level limits are 65 dBA L_{eq} during the daytime hours (8:00 a.m. to 10:00 p.m.) and 60 dBA L_{eq} during the nighttime hours (10:01 p.m. to 7:59 a.m.).

Construction Noise Standards

The City Municipal Code has established restrictions on the time of day that construction activities can occur. Moreno Valley Municipal Code Section 11.80.030.D.7, Construction and Demolition, states:

> No person shall operate or cause operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of 8:00 p.m. and 7:00 a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee.

A noise disturbance is defined by the Moreno Valley Municipal Code as any sound that (a) disturbs a reasonable person of normal sensitivities, (b) exceeds the sound level limits set forth in Municipal Code Table 11.80.030-2, or (c) is plainly audible as defined in Municipal Code Section 11.80.030. Where no specific distance is set forth for the determination of audibility, references to noise disturbance are deemed to mean plainly audible at a distance of 200 feet from the real property line of the source of the sound on private property or from the source of the sound on roads or other publicly owned property.

4.13.3 Significance Criteria

The significance criteria used to evaluate the Project's noise impacts are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to noise would occur if the Project would:

1. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
2. Result in generation of excessive groundborne vibration or groundborne noise levels.
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

For purposes of CEQA, for residential projects, the effects of noise generated by Project occupants and their guests on human beings is not a significant effect on the environment (California Public Resources Code, Section 21085).

4.13.4 Impact Analysis

4.13.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR determined that portions of the proposed residential development areas adjacent to major arterials could be exposed to traffic noise levels that exceed exterior noise level standards or could cause interior noise level standards to be exceeded. The original SP 218's proposed high school and elementary school had the potential to be exposed to noise levels that would exceed outdoor and indoor City noise level standards. Portions of the original SP 218's community park were determined to also be exposed to exterior noise levels that would exceed the City's standards (City of Moreno Valley 1999b).

Implementation of the original SP 218's proposed middle school, golf course, commercial uses, and office uses would not have significant impacts to noise. In addition, traffic generated from the original SP 218 as described in the 1999 EIR would not create significant increases in noise levels along the surrounding off-site circulation system roadways (City of Moreno Valley 1999b).

Mitigation

The original SP 218 proposed 6-foot-high masonry walls separating the residential areas from the roads. The City would be required to verify that future residents would meet City noise standards by conducting an acoustic analysis to be reviewed by the City's Community Development Department (City of Moreno Valley 1999b).

2003 Supplemental EIR

Analysis

Impacts to noise were determined to be consistent with the original 1999 EIR (City of Moreno Valley 2003).

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum includes a traffic study that indicated that the revised age-restricted active adult development would generate approximately 55% less traffic than the original SP 218. Therefore, long-term noise impacts generated from vehicular traffic would be reduced. The 2005 Addendum concluded that impacts to noise from implementation of the 2005 Aquabella SPA would be less than or equal to those from the original SP 218 (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was identified.

4.13.4.2 Project Impact Analysis

Threshold 1: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Noise Assessment

As described under Section 3.1, Construction Noise Methodology, of Appendix I, construction noise modeling was performed to predict construction noise levels at noise-sensitive land uses in the Project vicinity. Figure 4.13-2, Modeled Construction Noise Receivers, illustrates the location of the closest receiver to each Project construction phase. These receivers each represent the worst-case noise exposure position in each phase of Project construction.

Overlap of construction phases or activities may occur but would not be anticipated to worsen these construction noise estimates in light of the physical distance between such activities and different receivers that are closest to the different phase area boundaries. Tables 4.13-4 to 4.13-9 provide a summary of the construction noise modeling for each Project phase and each construction activity. Detailed information concerning construction phasing is provided in Appendix D, Air Quality, Greenhouse Gases, and Energy Technical Report.

Table 4.13-4. Phase 1 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Activity	Construction Noise Level (dBA) at CR1 From Closest Construction Boundary	Construction Noise Level (dBA) at CR1 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	74	54	80
(2) Paving	74	54	
(3) Residential Building Construction	62	57	
(4) Park Construction	73	51	
(5) Architectural Coating Res. Bld.	66	50	
(6) Architectural Coating Park	68	45	

Source: Appendix I.
Note: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.

Table 4.13-5. Phase 2 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR2 From Closest Construction Boundary	Construction Noise Level (dBA) at CR2 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	55	47	80

Table 4.13-5. Phase 2 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR2 From Closest Construction Boundary	Construction Noise Level (dBA) at CR2 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(2) Paving	54	47	
(3) Residential Building Construction	49	50	
(4) Hotel Construction	51	44	
(5) Park Construction	49	42	
(6) Architectural Coating Res. Bld.	42	35	
(7) Architectural Coating Hotel	45	38	
(8) Architectural Coating Park	45	38	

Source: Appendix I.
Note: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.

Table 4.13-6. Phase 3 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR2 From Closest Construction Boundary	Construction Noise Level (dBA) at CR2 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	75	58	80
(2) Paving	74	58	
(3) Residential Building Construction	72	60	
(4) Elem. School Construction	72	51	
(5) Middle School Construction	72	51	
(6) Park Construction	72	52	
(7) Architectural Coating Res. Bld.	62	45	
(8) Architectural Coating Elem. School	65	48	
(9) Architectural Coating Middle School	65	48	
(10) Architectural Coating Park	65	48	

Source: Appendix I.
Note: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.

Table 4.13-7. Phase 4 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR2 From Closest Construction Boundary	Construction Noise Level (dBA) at CR2 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	**85**	62	80
(2) Paving	**85**	62	
(3) Residential Building Construction	79	65	
(4) Elem. School Construction	79	56	
(5) Park Construction	80	57	
(6) Architectural Coating Res. Bld.	70	58	
(7) Architectural Coating Elem. School	73	53	
(8) Architectural Coating Park	73	53	

Source: Appendix I.
Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.
Bold values exceed the recommended limit.

Table 4.13-8. Phase 5 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR1 From Closest Construction Boundary	Construction Noise Level (dBA) at CR1 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	**84**	54	80
(2) Paving	**84**	54	
(3) Residential Building Construction	78	57	
(4) Park Construction	79	51	
(5) Architectural Coating Res. Bld.	69	50	
(6) Architectural Coating Park	72	45	

Source: Appendix I.
Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.
Bold values exceed the recommended limit.

Table 4.13-9. Phase 6 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR2 From Closest Construction Boundary	Construction Noise Level (dBA) at CR2 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	75	62	80

Table 4.13-9. Phase 6 Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR2 From Closest Construction Boundary	Construction Noise Level (dBA) at CR2 From Construction Acoustic Center	Recommended Limit (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(2) Paving	75	62	
(3) Residential Building Construction	69	65	
(4) Elem. School Construction	69	56	
(5) Architectural Coating Res. Bld.	62	58	
(6) Architectural Coating Elem. School	61	53	

Source: Appendix I.
Note: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.

As shown in Tables 4.13-4, 4.13-5, 4.13-6, and 4.13-9, construction noise levels from activity along the closest boundary to an adjacent residence during Phases 1, 2, 3, and 6 would remain below the FTA's recommended limit of 80 dBA $L_{eq\text{-}8hr}$. These represent the worst-case noise exposures during these phases. Average noise levels at the closest residence would fall even further below the recommended limit of 80 dBA $L_{eq\text{-}8hr}$ using the distance from the geographic center (acoustic center) of each phase's development area (which would be representative of average noise exposure levels for construction across the entire phase). Noise levels at more distant sensitive receptors would also be lower than these worst-case estimates.

As shown in Tables 4.13-7 and 4.13-8, construction noise levels from site preparation and paving activity along the closest boundary to an adjacent residence during Phases 4 and 5 would exceed the recommended limit of 80 dBA $L_{eq\text{-}8hr}$, which is considered a **potentially significant short-term noise impact.** The other construction activities when conducted along the closest boundary would produce noise levels that would be below the recommended limit. Construction noise mitigation, in the form of a perimeter noise barrier located along the Phase 4 and 5 boundaries with noise sensitive land uses, is recommended to prevent noise levels at the closest residences to construction of these phases from exceeding the recommended FTA noise limit for construction activities. As with the other phases, Tables 4.13-7 and 4.13-8 present the worst-case noise exposures during Phases 4 and 5. Average noise levels at the closest residences would fall well below the recommended limit of 80 dBA $L_{eq\text{-}8hr,}$ using the distance from the geographic center (acoustic center) of the Phase 4 and Phase 5 areas, which would be representative of average noise exposure levels for construction across the entire phase. Noise levels at more distance sensitive receptors would also be lower than these worst-case estimates.

Construction Noise Compared to Ambient Noise Levels and Moreno Valley Standards

Measured daytime ambient noise levels at residences in the Project vicinity ranged from 53 to 72 dBA L_{eq}, while modeled traffic noise exposure from existing traffic volumes ranged from 57 to 71 dBA CNEL (with daytime average L_{eq} values normally close to the CNEL values). Construction noise levels from activity along the phase boundaries closest to adjacent residents would produce noise levels in the range of 69–84 dBA L_{eq}, which represents a temporary increase of up to 27 dBA $L_{eq.}$ Using the average noise levels from construction across an entire phase, as represented by the acoustic center distances, more typical average construction noise levels at sensitive receivers would range from 45 to 62 dBA L_{eq}, which would increase ambient levels by 5 dBA L_{eq} or less.

Exterior construction noise levels at the closest receivers along the closest Project construction phase boundary would be easily noticeable above ambient levels and would likely result in some annoyance. However, the exterior noise levels at the closest residences during construction would remain below the Moreno Valley Municipal Code limit of 90 dBA L_{eq} over an 8-hour exposure (typical construction shift). Therefore, construction noise at the predicted maximum of 85 dBA L_{eq} at the closest residences would not be considered harmful. However, impacts due to construction noise would be **potentially significant** due to noise levels being easily noticeable above ambient levels.

Mitigation Measure (MM) NOI-1 and **MM-NOI-2** are required to limit exterior exposure levels from construction activities at the closest residences to no more than 80 dBA $L_{eq\ 8hr}$. Such mitigation would reduce the potential for construction noise annoyance for the closest noise sensitive receivers. With incorporation of **MM-NOI-1** and **MM-NOI-2**, Project construction noise impacts would be reduced to less than significant levels. Tables 4.13-10 and 4.13-11 present the residual construction noise levels for Phase 4 and Phase 5 with incorporation of mitigation.

Table 4.13-10. Phase 4 Mitigated Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR2 From Closest Construction Boundary	MITIGATED Construction Noise Level (dBA) at CR2 From Construction Acoustic Center	Above Recommended FTA Limit (80 Leq 8-hr)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	**85**	71	No
(2) Paving	**85**	71	
(3) Residential Building Construction	79	65	
(4) Elem. School Construction	79	65	
(5) Park Construction	80	66	
(6) Architectural Coating Res. Bld.	70	56	
(7) Architectural Coating Elem. School	73	59	
(8) Architectural Coating Park	73	59	

Source: Appendix I.
Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.
Bold values exceed the recommended limit.

Table 4.13-11. Phase 5 Mitigated Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR1 From Closest Construction Boundary	MITIGATED Construction Noise Level (dBA) at CR1 From Construction Acoustic Center	Above Recommended FTA Limit (80 Leq 8-hr) (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(1) Site Preparation	**84**	70	No
(2) Paving	**84**	70	
(3) Residential Building Construction	78	64	

Table 4.13-11. Phase 5 Mitigated Construction Noise Levels at Nearby Noise-Sensitive Receiver

Phase	Construction Noise Level (dBA) at CR1 From Closest Construction Boundary	MITIGATED Construction Noise Level (dBA) at CR1 From Construction Acoustic Center	Above Recommended FTA Limit (80 Leq 8-hr) (FTA)
	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$	$L_{eq\ 8\text{-}hr}$
(4) Park Construction	79	65	
(5) Architectural Coating Res. Bld.	69	55	
(6) Architectural Coating Park	72	58	

Source: Appendix I.
Note: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); FTA = Federal Transit Administration.
Bold values exceed the recommended limit.

Further, these exterior noise levels would be attenuated by approximately 25 dBA inside the affected residences, such that interior daytime construction noise levels would not be expected to exceed 60 dBA L_{eq} and would therefore not interfere with conversations or other household noise-sensitive activities. Construction noise impacts would be **less than significant with mitigation**.

Traffic Noise Assessment

Urban Crossroads evaluated Project-related average daily traffic on the roadway network surrounding and serving the Project site (Appendix K3). Project-related traffic noise levels were examined along the Traffic Focus Study Area (see Figure 4.19-1A) roadways using the results of the traffic analysis.

Project Construction Traffic Noise

On an average day of construction, it is anticipated that the maximum number of construction worker trips would be approximately 200, with a maximum of 20 vendor truck trips. These construction-related trips would represent a very small percentage of the existing traffic trips on the roadway network within the Focus Study Area, and therefore construction-related traffic noise impacts would be **less than significant**.

Project Operational Traffic Noise

As described in Section 3.2, Traffic Noise Methodology, of Appendix I, acoustical calculations using standard noise modeling equations adapted from the Federal Highway Administration noise prediction model were performed using the average daily traffic values for Horizon Year (2045) partial World Logistics Center (WLC) Buildout – without and with Project, and Horizon Year (2045) full WLC Buildout – without and with Project. Tables 4.13-12 and 4.13-13 present the results of the traffic noise modeling; detailed information is provided in Appendix I.

Table 4.13-12. Horizon Year (2045) Partial WLC Buildout Traffic Noise Levels– Without and With Project

Street Name	From	To	Noise Level Without Project CNEL dBA	Noise Level With Project CNEL dBA	Project Increase CNEL dBA
Alessandro BL	Kitching ST	Lasselle ST	73.4	73.9	0.5
Alessandro BL	Lasselle ST	Morison ST	72.6	73.1	0.6
Alessandro BL	Morison ST	Mason ST	72.0	72.6	0.6
Alessandro BL	Mason ST	Moreno Beach DR	71.0	71.8	0.7
Kitching ST	Alessandro BL	Brodiaea AV	70.7	70.8	0.1
Kitching ST	**Brodiaea AV**	**John F. Kennedy RD**	**70.3**	**72.4**	**2.2**
Kitching ST	**John F. Kennedy RD**	**Gentian AVE**	**70.6**	**72.5**	**2.0**
Kitching ST	**Gentian AVE**	**Moreno Beach DR.**	**70.1**	**71.7**	**1.6**
Iris AV	Kitching ST	Lasselle ST	72.7	73.4	0.7
Iris AV	Lasselle ST	Intersection 40	73.6	74.5	0.9
Iris AV	Intersection 40	Mason ST	73.2	74.3	1.1
Iris AV	Mason ST	Kaiser Hospital	72.2	72.6	0.4
Iris AV	Kaiser Hospital	Oliver ST	71.4	71.7	0.3
Moreno Beach DR	Oliver ST	John F. Kennedy RD	71.0	71.2	0.3
Moreno Beach DR	Cactus AV	John F. Kennedy RD	70.1	70.4	0.3
Moreno Beach DR	Brodiaea AV	Cactus AV	70.1	70.4	0.2
Moreno Beach DR	Alessandro BL	Brodiaea AV	70.7	70.9	0.2
Lasselle ST	Alessandro BL	Brodiaea AV	70.4	71.0	0.6
Lasselle ST	Brodiaea AV	Cactus AV	70.2	70.7	0.6
Lasselle ST	Cactus AV	Delphinium AV	72.1	72.4	0.3
Lasselle ST	Delphinium AV	John F. Kennedy RD	71.5	71.9	0.4
Lasselle ST	John F. Kennedy RD	Gentian AV	71.9	72.5	0.6
Lasselle ST	Gentian AV	Iris AV	71.4	71.7	0.4
Mason ST	Alessandro BL	E Hospital	72.1	73.5	1.4
Mason ST	**E Hospital**	**Cactus AV**	**71.4**	**73.1**	**1.7**
Mason ST	**Cactus AV**	**Delphinium AV**	**70.1**	**72.5**	**2.4**
Mason ST	**Delphinium AV**	**Iris AV**	**69.7**	**72.1**	**2.4**
Oliver ST	Alessandro BL	Cactus AV	61.7	63.7	1.9
Oliver ST	Cactus AV	John F. Kennedy RD	63.8	66.7	2.9
Oliver ST	John F. Kennedy RD	Moreno Beach DR	62.5	65.5	3.0
Cactus AV	Kitching ST	Lasselle ST	71.8	73.4	1.6
Cactus AV	Lasselle ST	Mason ST	73.1	74.5	1.4
Cactus AV	Mason ST	Moreno Beach DR	70.5	72.5	2.0
Brodiaea AV	Kitching ST	Lasselle ST	62.7	62.8	0.1

Table 4.13-12. Horizon Year (2045) Partial WLC Buildout Traffic Noise Levels–Without and With Project

Street Name	From	To	Noise Level Without Project CNEL dBA	Noise Level With Project CNEL dBA	Project Increase CNEL dBA
Brodiaea AV	Oliver ST	Moreno Beach DR.	56.8	58.5	1.8
Delphinium AV	Kitching ST	Lasselle ST	61.4	63.3	1.9
Delphinium AV	Intersection 20	Delphinium AV	59.8	59.8	0.0
John F Kennedy DR	Kitching ST	Lasselle ST	69.7	71.1	1.3
John F Kennedy DR	**Intersection 12**	**PA-2**	**67.1**	**70.8**	**3.8**
John F Kennedy DR	Oliver ST	Moreno Beach DR	63.7	66.3	2.6
Gentian AV	Kitching ST	Lasselle ST	66.1	66.3	0.2
Gentian AV	Intersection 13	Gentian AV	61.2	62.5	1.3

Source: Appendix I.
Notes: Bold entries indicate an exceedance of applicable FICON threshold.
[1] Sound level calculated at 50 feet from road centerline. dBA = A-weighted decibels; CNEL = community noise equivalent level.

Table 4.13-13. Horizon Year (2045) Full WLC Buildout Traffic Noise Levels–Without and With Project

Street Name	From	To	Noise Level Without Project CNEL dBA	Noise Level With Project CNEL dBA	Project Increase CNEL dBA
Alessandro BL	Kitching ST	Lasselle ST	73.6	74.0	0.5
Alessandro BL	Lasselle ST	Morison ST	72.8	73.3	0.6
Alessandro BL	Morison ST	Mason ST	72.2	72.8	0.6
Alessandro BL	Mason ST	Moreno Beach DR	71.3	72.1	0.8
Kitching ST	Alessandro BL	Brodiaea AV	70.7	70.8	0.1
Kitching ST	Brodiaea AV	John F. Kennedy RD	70.3	70.4	0.2
Kitching ST	John F. Kennedy RD	Gentian AVE	70.7	70.7	0.0
Kitching ST	Gentian AVE	Moreno Beach DR	70.5	70.2	-0.3
Iris AV	Kitching ST	Lasselle ST	72.7	73.4	0.7
Iris AV	Lasselle ST	Intersection 40	73.7	74.5	0.9
Iris AV	Intersection 40	Mason ST	73.3	74.3	1.0
Iris AV	Mason ST	Kaiser Hospital	72.4	72.9	0.5
Iris AV	Kaiser Hospital	Oliver ST	71.6	72.0	0.4
Moreno Beach DR	Oliver ST	John F. Kennedy RD	71.4	71.6	0.2
Moreno Beach DR	Cactus AV	John F. Kennedy RD	70.3	70.7	0.4
Moreno Beach DR	Brodiaea AV	Cactus AV	70.2	70.5	0.3
Moreno Beach DR	Alessandro BL	Brodiaea AV	70.8	71.1	0.3
Lasselle ST	Alessandro BL	Brodiaea AV	70.4	71.0	0.6

Table 4.13-13. Horizon Year (2045) Full WLC Buildout Traffic Noise Levels—Without and With Project

Street Name	From	To	Noise Level Without Project CNEL dBA	Noise Level With Project CNEL dBA	Project Increase CNEL dBA
Lasselle ST	Brodiaea AV	Cactus AV	70.2	70.7	0.6
Lasselle ST	Cactus AV	Delphinium AV	72.2	72.5	0.3
Lasselle ST	Delphinium AV	John F. Kennedy RD	71.6	71.9	0.3
Lasselle ST	John F. Kennedy RD	Gentian AV	72.0	72.5	0.6
Lasselle ST	Gentian AV	Iris AV	71.4	71.8	0.4
Mason ST	Alessandro BL	E Hospital	72.1	73.5	1.4
Mason ST	**E Hospital**	**Cactus AV**	**71.5**	**73.2**	**1.7**
Mason ST	**Cactus AV**	**Delphinium AV**	**70.1**	**72.5**	**2.4**
Mason ST	**Delphinium AV**	**Iris AV**	**69.7**	**72.1**	**2.4**
Oliver ST	Alessandro BL	Cactus AV	61.7	63.7	1.9
Oliver ST	Cactus AV	John F. Kennedy RD	63.8	66.8	3.0
Oliver ST	John F. Kennedy RD	Moreno Beach DR.	62.5	65.5	3.0
Cactus AV	Kitching ST	Lasselle ST	72.0	73.5	1.5
Cactus AV	Lasselle ST	Mason ST	73.3	74.6	1.3
Cactus AV	Mason ST	Moreno Beach DR	71.7	72.9	1.2
Brodiaea AV	Kitching ST	Lasselle ST	62.7	62.8	0.1
Brodiaea AV	Oliver ST	Moreno Beach DR	56.8	58.5	1.8
Delphinium AV	Kitching ST	Lasselle ST	61.4	63.3	1.9
Delphinium AV	Intersection 20	Delphinium AV	59.8	64.7	4.9
John F Kennedy DR	Kitching ST	Lasselle ST	69.8	71.0	1.2
John F Kennedy DR	**Intersection 12**	**PA-2**	**67.1**	**70.7**	**3.7**
John F Kennedy DR	Oliver ST	Moreno Beach DR	63.7	66.3	2.6
Gentian AV	Kitching ST	Lasselle ST	66.1	66.3	0.2
Gentian AV	Intersection 13	Gentian AV	61.2	62.5	1.3

Source: Appendix I.
Notes: Bold entries indicate an exceedance of applicable FICON threshold
[1] Sound level calculated at 50 feet from road centerline. dBA = A-weighted decibels; CNEL = community noise equivalent level.

Long-term traffic noise that affects sensitive land uses would be considered substantial and constitute a significant noise impact if the Project would:

- Increase noise levels by 5 dB or more where the no-Project noise level is less than 60 CNEL
- Increase noise levels by 3 dB or more where the no-Project noise level is 60 CNEL to 65 CNEL
- Increase noise levels by 1.5 dB or more where the no-Project noise level is greater than 65 CNEL

Refer to Table 4.13-3, describing FICON criteria.

As indicated in Table 4.13-12, Project traffic would result in traffic noise increases that exceed the FICON thresholds for seven street segments. Although the noise level increases would remain less than 3 dBA (which would not be noticeable to a typical resident), because of the already elevated ambient noise levels, an increase of 1.5 dBA or more is considered significant for these segments as a lesser increase may lead to annoyance. Thus, the Project would have **potentially significant traffic noise impacts** when compared to traffic noise levels in Horizon Year (2045) under partial WLC buildout. Mitigation involving traffic calming or reduction in posted speeds for affected segments of John F Kennedy Drive, Kitching Street, and Mason Street is recommended to reduce these impacts. Since roadway traffic noise is a function of vehicle speed, reducing the travel speed on these roadways can effectively decrease traffic noise levels.

As indicated in Table 4.13-13, Project traffic would result in traffic noise increases that exceed the FICON thresholds for four street segments. Thus, the Project would have **potentially significant traffic noise impacts** when compared to traffic noise levels in Horizon Year (2045) under full WLC buildout. Mitigation involving traffic calming or reduction in posted speeds for affected segments of John F Kennedy Drive and Mason Street is recommended to reduce these impacts.

To address potentially significant impacts related to traffic noise, **MM-NOI-3** would be implemented, which would require the use of traffic-calming measures on several road segments to reduce traffic noise. With **MM-NOI-3**, the impact would be **less than significant with mitigation**. Table 4.13-14 illustrates the traffic noise levels after mitigation along roadway segments that would have potentially significant noise increases absent mitigation.

Table 4.13-14. Traffic Noise Levels - Mitigated

Street Name	From	To	Noise Level Without Project CNEL dBA	Noise Level With Project CNEL dBA	Project Increase CNEL dBA
Horizon Year (2045) Partial WLC Buildout Traffic Noise Levels Without and With Project (Mitigated)					
Kitching ST	Brodiaea AV	John F. Kennedy RD	70.3	70.9	0.6
Kitching ST	John F. Kennedy RD	Gentian AV	70.6	71.0	0.4
Kitching ST	Gentian AV	Moreno Beach DR.	70.1	70.2	0.1
Mason ST	E Hospital	Cactus AV	71.4	71.6	0.2
Mason ST	Cactus AV	Delphinium AV	70.1	70.9	0.8
Mason ST	Delphinium AV	Iris AV	69.7	70.6	0.9
John F Kennedy DR	Intersection 12	PA-2	67.1	67.8	0.7
Horizon Year (2045) WLC Buildout Traffic Noise Levels Without and With Project (Mitigated)					
Kitching ST	Brodiaea AV	John F. Kennedy RD	70.3	68.8	-1.5
Kitching ST	John F. Kennedy RD	Gentian AV	70.7	69.1	-1.6
Kitching ST	Gentian AV	Moreno Beach DR.	70.5	68.7	-1.8
Mason ST	E Hospital	Cactus AV	71.5	71.6	0.1
Mason ST	Cactus AV	Delphinium AV	70.1	70.9	0.8
Mason ST	Delphinium AV	Iris AV	69.7	70.6	0.9
John F Kennedy DR	Intersection 12	PA-2	67.1	67.7	0.6

Source: Appendix I.

Notes:
[1] Sound level calculated at 50 feet from road centerline with mitigated road segment speed of 35 MPH. dBA = A-weighted decibels; CNEL = community noise equivalent level.

Operational Noise Assessment

As described under Section 3.1.3, Operational Noise Methodology, of Appendix I, operational noise related to HVAC equipment was modeled in the CadnaA model space, with a receiver at the closest existing residence to each of the groupings of perimeter residential structures. Figure 4.13-4 illustrates each of the multifamily residential structures modeled as sound sources for operational noise levels. Buildings G1–G20 each represent a garden apartment building housing 20 dwelling units, with 20 HVAC packages mounted on each building roof. Buildings H1–H14 each represent a garden apartment building housing 20 dwelling units, with 20 HVAC packages mounted on each building roof.

Table 4.13-15 presents the results of the operational noise modeling at the seven modeled receivers (refer to Figure 4.13-2) and compares these modeled operational noise levels to limits contained in the Moreno Valley Municipal Code. Detailed information for the operational noise modeling is provided in Appendix I.

As indicated in Table 14.13-15, even if all facility equipment operated continuously over a 24-hour period, the predicted operational sound level at each of the modeled residential receiver locations would fall well below the zoning ordinance limit of 65 dBA CNEL. In addition, the predicted operational noise would remain at least 20 dBA below recorded ambient noise levels in the Project vicinity; therefore, the addition of Project operational noise would not increase ambient noise levels above existing conditions. Other sources of operational noise would primarily be associated with noise generated by residents and their guests, which is not an environmental impact under CEQA (California Public Resources Code, Section 21085). Consequently, operational noise impacts of the Project would be **less than significant.**

Table 4.13-15. Project Operational Noise Levels Compared to Municipal Code Limits

Receptor ID	Predicted Operational Noise Level (dBA L_{eq})	Noise Ordinance Limit (dBA CNEL)[1]	Limit Exceeded?
Receiver 1	24	55	No
Receiver 2	22		No
Receiver 3	23		No
Receiver 4	24		No
Receiver 5	26		No
Receiver 6	27		No
Receiver 7	31		No

Source: Appendix I.
Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level (time-averaged sound level); CNEL = community noise equivalent level.
[1] Most restrictive residential nighttime limit.

CadnaA calculated the noise level across the entire grid that encompasses the Project site and adjacent areas. Figure 4.13-4 graphically represents the noise model results, providing noise contours extending outward from the proposed Project to illustrate the hourly noise level from operation of the Project. As illustrated on Figure 4.13-4, the 35–40 dBA L_{eq} contour barely extends beyond the multifamily residential structures and is fully contained within the Project site.

Threshold 2: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Caltrans has been assembling data for vibration levels generated by heavy construction equipment operation during the building of transportation projects for many years. The vibration levels from use of such equipment are representative for other types of construction efforts, not just transportation projects, and are therefore widely employed to assess vibration levels from heavy equipment use for any effort. The most important equipment relative to generation of vibration according to Caltrans (2020), as well as the vibration levels produced by such equipment, is illustrated in Table 4.13-16.

Table 4.13-16. Vibration Velocities for Typical Construction Equipment

Equipment	PPV at 25 Feet (Inches Per Second)	Approximate VdB at 25 feet
Vibratory Roller	0.210	94
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Drill Rig/Auger	0.089	97
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Caltrans 2020.
Note: PPV = peak particle velocity; VdB = vibration decibels.

The City has not adopted quantified standards governing vibration from construction projects, but Section 9.10.170 of the Municipal Code states that "No vibration shall be permitted which can be felt at or beyond the property line." Accordingly, for the purposes of this analysis, Caltrans' vibration annoyance threshold of 0.2 ips PPV shall be used to assess the potential impacts due to Project construction at nearby sensitive receptor locations. Using the vibration level value for each of the equipment listed in Table 4.13-15, the distance to the target vibration level of 0.2 ips PPV was determined, using the following formula:

$$\text{Peak particle velocity at distance (d)} = \text{peak particle velocity}(d_{ref}) * (d_{ref}/d)^{1.5}$$

In the above equation, "d" is the distance between the receptor and a vibration source and "d_{ref}" is the reference distance that applies for the indicated vibration magnitude. The calculated distance to a vibration level of 0.2 ips PPV represents the radius from each equipment type within which potentially significant vibration impacts from Project construction could occur. Table 4.13-16 presents the results of applying the above equation to the equipment in Table 4-15-16.

As illustrated in Table 4.13-16, groundborne vibration levels for most construction equipment would attenuate to less than 0.2 ips PPV within approximately 15 feet from the equipment. For a vibratory roller, the distance at which ground borne vibration levels would attenuate to 0.2 ips PPV would be approximately 30 feet.

Construction Vibration Assessment

As discussed in Section 3.4.3, Vibration Methodology, of Appendix I, groundborne vibration generated from construction equipment would be attenuated to 0.2 ips PPV (the threshold for human annoyance) at a distance of no greater than 60 feet from construction activity. Consequently, for construction activities that are no closer than 60 feet from vibration sensitive uses, including residences, construction-related vibration levels would remain below

the significance threshold. Existing structures are no closer than approximately 70 feet from the boundary of any future Project construction zones. Therefore, the Project would have a **less than significant impact** relative to the risk of damage to structures from construction vibration.

Operational Vibration Assessment

The ongoing operation of residential structures, retail space, educational, open space, and commercial uses proposed by the Project would not generally involve rotational equipment or impact equipment (pile driving) that typically could result in vibration. Truck deliveries could occur in relation to the Project's commercial uses. As discussed under construction vibration, potentially significant vibration impacts from a loaded truck operation would be limited to a distance of 18 feet, which would not extend beyond the road right-of-way for roads used by the trucks to access future commercial buildings of the site. Consequently, long-term operation of the Project would not be anticipated to generated perceptible vibration levels in vicinity structures. Operational vibration levels would therefore be **less than significant**.

Threshold 3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?

The closest airport to the Project site is the March Air Reserve Base located approximately 2.5 miles southwest. According to the March Air Reserve Base 2018 Air Installations Compatible Use Zones Study (Figure 4-2, Noise Contours, in MARB 2018), the Project site lies outside of the 60 dBA CNEL contour for airport operations. Airport operations and aircraft activity associated with March Air Reserve Base would not contribute to ambient noise levels in the Project vicinity, nor result in the exposure of vicinity residents or Project-related construction workers to excessive noise levels. Because the Project is not located within an airport land use plan or within 2 miles of a public airport or public use airport, there would be **no impact**.

4.13.5 Significance of Impacts Before Mitigation

Threshold 1: Ambient Noise Levels

Impacts related to construction noise would be **potentially significant.** Impacts related to traffic noise would be **potentially significant**. Impacts related to Project operational noise would be **less than significant.**

Threshold 2: Vibration

Impacts related to Project construction vibration and groundborne noise would be **less than significant.** Impacts related to Project operational vibration and groundborne noise would be **less than significant.**

Threshold 3: Airport Noise

Impacts related to airport noise would be **less than significant.**

4.13.6 Mitigation Measures

4.13.6.1 Previously Adopted Mitigation Measures

1999 EIR

On-Site Traffic Noise – Table 17 and Figure 11 of the 1999 EIR identify those areas within the project site which would be significantly impacted by traffic noise. The Specific Plan anticipates that residential areas fronting arterial roads would have continuous six-foot high masonry walls were not available, they were not analyzed for noise attenuation characteristics. However, they may provide substantial noise reduction for noise sensitive receptors identified on-site.

Subsequent development proposed for areas in the Specific Plan identified as having the potential for exposure to adverse noise levels, as identified in Table 17 and Figure 11 of the 1999 EIR, shall be reviewed by the City's Community and Economic Development Department and may require preparation of an acoustical analysis with appropriate recommendations for mitigation. The City's Community Development Department shall verify that the noise barrier mitigation recommendations are made conditions of approval of the future maps and development plans. These barriers shall be in compliance with all City ordinances.

2003 Supplemental EIR

No additional mitigation measures were required.

2005 Addendum

No additional mitigation measures were required.

Summary

Based on *California Building Industry Association v. Bay Area Air Quality Management District*, CEQA no longer requires evaluation of the environment upon a project, including traffic noise that may exist in the vicinity. Therefore, roadway traffic noise exposure for new residences within the Specific Plan Area would not be a significant impact under CEQA. As such, the mitigation measure introduced in the 1999 EIR related to the effects of traffic noise on sensitive receptors on the Project site would no longer be required and is not included in this Subsequent EIR. The previous mitigation measure will be rescinded and replaced with the below mitigation measures.

4.13.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

MM-NOI-1 Construction Noise Barrier. For construction activities in Phase 4 and Phase 5 that would occur closer than 120 feet from an off-site adjacent residence, a 10-foot-high temporary noise barrier shall be installed and maintained between the construction zone and neighboring residences. The barrier shall have a Standard Transmission Class (STC) rating of not less than 25.

MM-NOI-2 Construction Noise Equipment Controls.

- The use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only.
- Construction equipment will be muffled per manufacturer's specifications. Electrically powered equipment will be used instead of pneumatic or internal combustion powered equipment, where feasible.
- All stationary construction equipment will be placed in a manner so that emitted noise is directed away or blocked from sensitive receptors nearest the Project site where possible.

MM-NOI-3 Traffic Calming Measures. Prior to issuance of the first certificate of occupancy, average speeds on the impacted segments of John F Kennedy Drive, Kitching and Mason Streets shall be reduced by 5 miles per hour or more through the implementation of one or more of the following measures: posting lower speed limits, installing speed humps, or narrowing the overall lane widths with planters or dedicated bike lanes. The impacted segments of these roadways include:

- John F. Kennedy Drive from Kitching Street to Lasselle Street, Intersection 12 to PA 2, and Oliver Street to Moreno Beach Drive.
- Kitching Street from Brodiaea to Moreno Beach Drive.
- Mason Street from E. Hospital to Iris Avenue.

4.13.7 Significance of Impacts after Mitigation

Threshold 1: Ambient Noise Levels

With implementation of **MM-NOI-1** and **MM-NOI-2,** impacts related to construction noise would be **less than significant with mitigation.** With implementation of **MM-NOI-3,** impacts related to traffic noise would be **less than significant with mitigation**. Impacts related to Project operational noise would be **less than significant**, and no mitigation measures are required**.**

Threshold 2: Vibration

Impacts would be **less than significant,** and no mitigation would be required.

Threshold 3: Airport Noise

Impacts would be **less than significant,** and no mitigation would be required.

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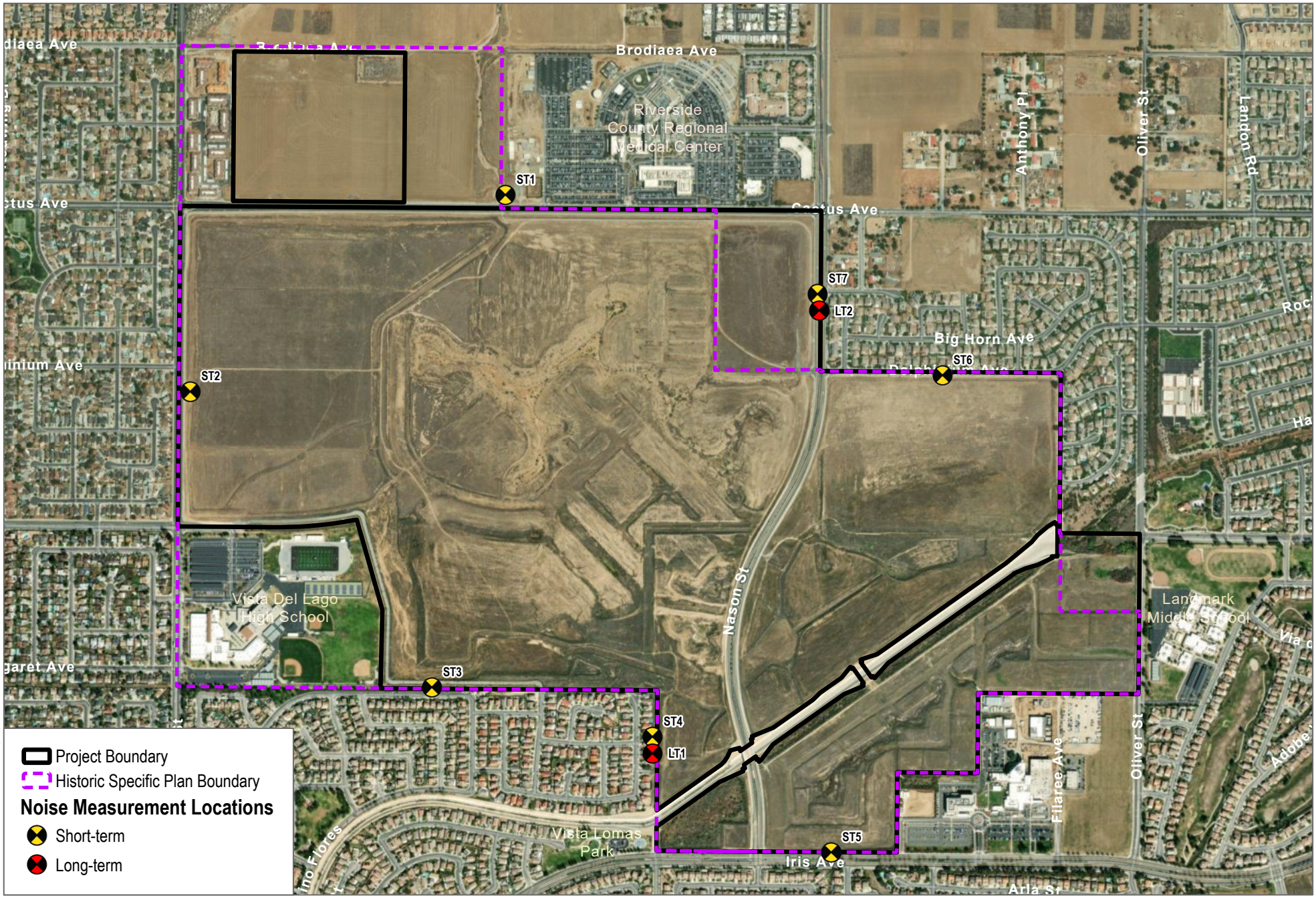

SOURCE: Maxar 2022

DUDEK

0 500 1,000 Feet

FIGURE 4.13-1

Ambient Noise Measurement Locations

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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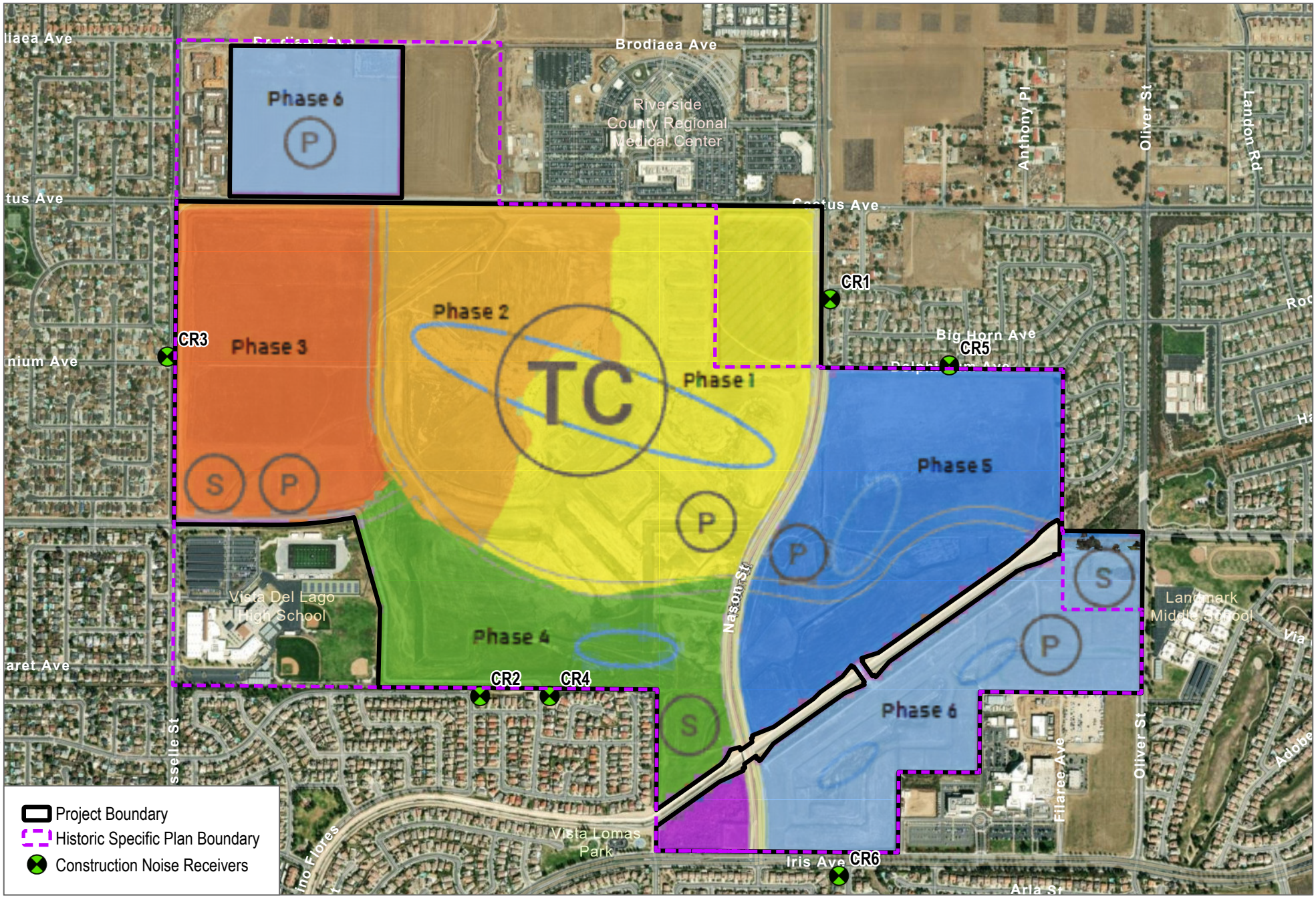

SOURCE: Maxar 2022

DUDEK

0 500 1,000 Feet

FIGURE 4.13-2

Modeled Receivers for Project Construction Noise

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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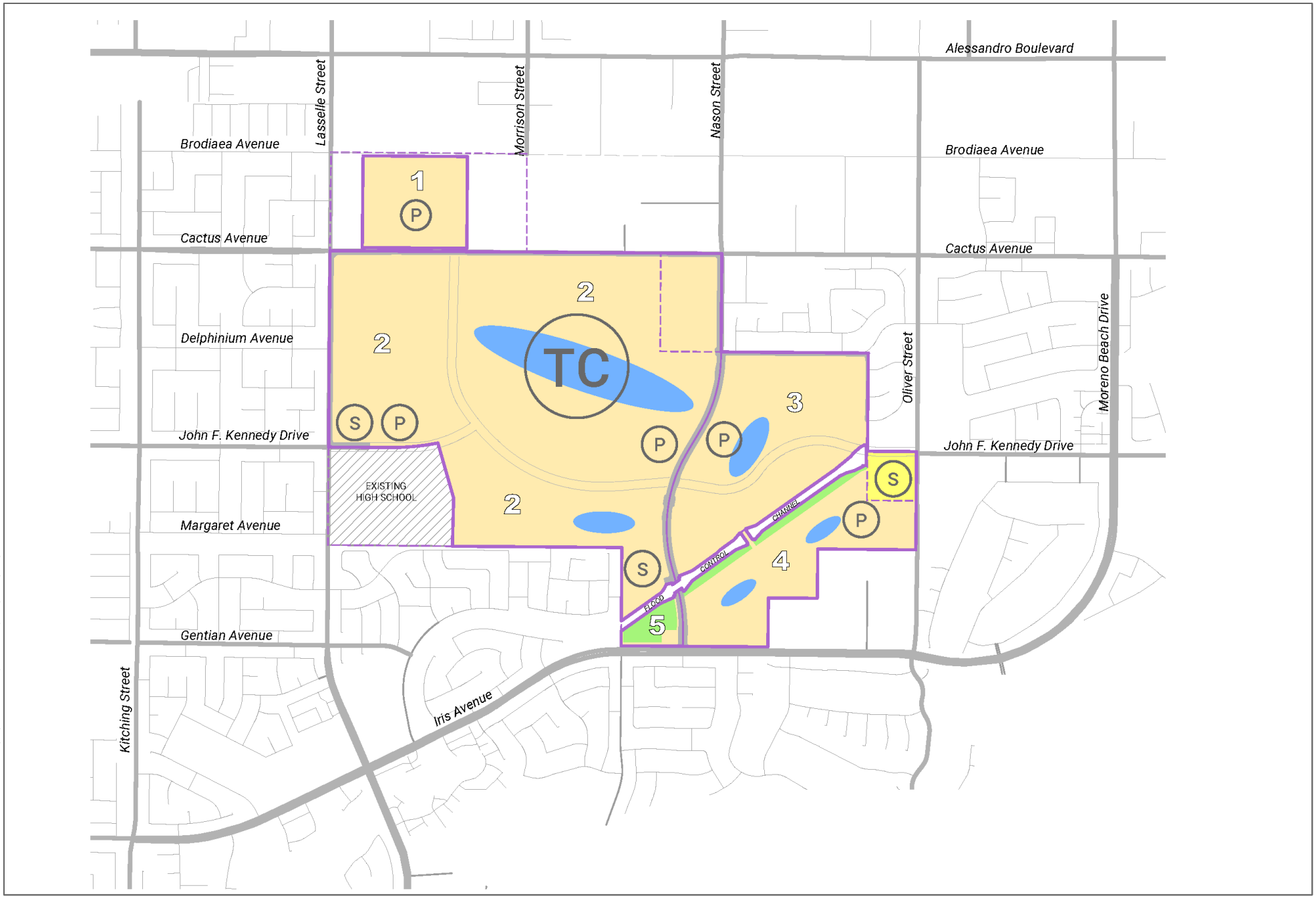

SOURCE: Urban Crossroads

FIGURE 4.13-3

Vicinity Roadways Analyzed for Traffic Noise

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

DUDEK

0 500 1,000 Feet

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SOURCE: Dudek 2022

DUDEK

0 500 1,000 Feet

FIGURE 4.13-4

Modeled Project Operational Noise Contours

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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4.14 Population and Housing

This section describes the existing population and housing conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the Project as compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in less than significant impacts related to population and housing (City of Moreno Valley 1999b, 2005b). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) did not discuss impacts to population and housing.

This section also describes the growth in population directly and indirectly related to implementation of the Project and the potential population and housing impacts that could result. Changes in population, employment, and housing demand are social and economic effects, not environmental effects. According to the California Environmental Quality Act (CEQA), these effects should be considered in an EIR only to the extent that they create adverse impacts on the physical environment. According to Section 15382 of the CEQA Guidelines, "an economic or social change by itself shall not be considered a significant effect on the environment."

This section is based on data available from the U.S. Census Bureau, the Southern California Association of Governments (SCAG), and the City of Moreno Valley General Plan 2040 (2040 General Plan) Housing Element[1];.

4.14.1 Existing Environmental Conditions

Project Site

The Project site consists of a partially graded, undeveloped infill site surrounded by housing of varying densities, two major medical centers, and educational uses.

Almost the entire Project site has a General Plan land use designation of Downtown Center-Specific Plan (DC-SP), which establishes no density minimum or maximum and envisions development of a vibrant mix of business, entertainment, residential, cultural, and civic uses to activate the Downtown Center. An area plan, specific plan, or site plan is required to demonstrate consistency with applicable principles outlined in the Land Use and Community Character Element of the 2040 General Plan within this Downtown Center area.

[1] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

A floating designation of Downtown Center–Planned Unit Development (DC-PUD) is also located on the Project site, indicating a general area within which a planned unit development (PUD) may provide for denser housing. The designation is suggestive, not mandatory, and the Project is not proposing a PUD component.

The 2005 Aquabella SPA currently allows for a density of up to 15 dwelling units per acre on the DC-SP designated area of the site (City of Moreno Valley 2005a). The small portion of the Project site along the eastern boundary is currently designated R5 Residential (R5), which allows 5 dwelling units per acre.

Corresponding zoning for the Project site is Downtown Center–Specific Plan (DC-SP), SP 218, indicating the zoning is Downtown Center and Specific Plan 218. The eastern parcel is currently zoned R5 Residential (R5).

Regional Setting

Population Trends

The City of Moreno Valley (City) is located within the northwestern portion of the County of Riverside. The Riverside region's 28 cities and unincorporated area are home to a current total population (at the time of preparation of this Subsequent EIR [SEIR]) of approximately 2,418,185 people (USCB 2020a).

As the region's planning organization responsible for growth projections and planning efforts, SCAG develops regional housing, population, and employment growth forecasts for local governments. As shown in Table 4.14-1, both the Riverside region and the City have experienced an increase in population since 2000. The region's current (2020) population of approximately 2.4 million is expected to increase by nearly 30% to reach a population of approximately 3.2 million by 2040.

Table 4.14-1. Moreno Valley and Riverside County Population Growth

	Population				Percent Change	
Jurisdiction	2000	2010	2020	2040 Forecast	2000–2010	2010–2020
City of Moreno Valley	142,379	193,365	208,838	256,000	35.8%	8.0%
County of Riverside	1,535,125	2,189,641	2,442,604	3,183,000	42.6%	11.5%

Source: City of Moreno Valley 2021a.

Housing

The Regional Housing Needs Assessment (RHNA) quantifies the need for existing and future housing for a planning period for each jurisdiction and allocates housing units based on income. The housing need is based on current and expected population, employment, and household growth. The RHNA allows communities to anticipate growth, so that collectively the region and subregion can grow in ways that enhance the quality of life, improve access to jobs, promote transportation mobility, and address social equity and fair share housing needs (SCAG 2020; City of Moreno Valley 2021a).

Housing production at the regional level is currently not projected to keep pace with population growth in the Riverside County subregion. SCAG's 6th Cycle RHNA identified the need for 167,351 housing units in

Riverside County from 2021 to 2029, which would necessitate development of approximately 20,919 units per year (Table 4.14-2).

Table 4.14-2. County of Riverside Subregional Housing Growth

Jurisdiction	Units Constructed					2021–2029 RHNA Allocation	Average Units Needed Per Year to Meet RHNA	Average Units Constructed Per Year (2018–2022)	Est. Annual Shortfall with Current Trajectory
	2018	2019	2020	2021	2022				
City of Moreno Valley	425	522	217	452	422	13,627	1,703	408	1,295
County of Riverside Total	5,053	6,536	6,363	2,210	1,766	167,351	20,919	4,386	16,533

Source: City of Moreno Valley 2021a; HCD 2023.
Note: RHNA = Regional Housing Needs Assessment.

Housing production statistics show the Riverside subregion falling well short of estimated need. In 2022, the County of Riverside produced 1,766 units and permitted 7,882 units. At this pace, the gap between housing demand and supply is expected to widen, falling well below the number of new residences needed to meet regional housing needs.

Local Setting

Population Trends

As of 2020, the City has a population of approximately 208,634 people and 50,620 households (USCB 2020b; City of Moreno Valley 2021a). As shown in Table 4.14-1, above, and Table 4.14-3, between 2000 and 2010, the City's population increased 35.8%, gaining 50,986 residents. Between 2010 and 2020, the City's population increased 8.0%, gaining 15,473 residents.

Table 4.14-3. Moreno Valley Population Growth 1995–2020

Jurisdiction	Population					
	1995	2000	2005	2007	2010	2020
Moreno Valley	132,669	142,379	167,262	180,466	193,365	208,838

Source: City of Moreno Valley 2021a.

Growth predictions for the City anticipate steady-to-rapid growth in the coming years. A 2020 market analysis conducted as part of the City's Housing Element predicted population growth of 5.1% between 2019 and 2024 in the City. SCAG and the City's Housing Element estimate that the Moreno Valley population will reach 256,600 in 2040, a 22.6% increase over the 2020 population (City of Moreno Valley 2021a). The Final EIR for the MoVal 2040: Moreno Valley Comprehensive Plan Update, Housing Element Update, and Climate Action Plan (2040 General Plan EIR) similarly projects a 2040 buildout population of 252,179 and a total of 72,737 households (City of Moreno Valley 2021b).

Employment Trends

Employment and job growth have a strong influence on population trends and housing needs. As shown in Table 4.14-4, management, business, science, and arts, as well as sales and office, are the most common occupations in the City.

Table 4.14-4. Resident Occupations within Moreno Valley

Occupation	Number of Jobs	Percentage
Management, business, science, and arts occupations	21,113	24.0%
Service	16,866	19.2%
Sales and office	20,856	23.7%
Natural resources, construction, and maintenance	10,299	11.7%
Production, transportation, and material moving	18,683	21.3%
Total	**87,817**	**100%**

Source: City of Moreno Valley 2021a.

The largest employers within the City presently include March Air Reserve Base, Amazon, Riverside University Health System Medical Center, Moreno Valley Unified School District, and Ross Dress for Less/dd's Discounts (City of Moreno Valley 2021a). Employment growth within the region is expected to see a 17.6% increase from 2016 to 2026. Employment in the construction and the transportation and warehouse sectors are expected to substantially increase in the region due to the City's large amount of warehouse and industrial space, access to the regional transportation network, and land available for development (City of Moreno Valley 2021c).

Overall Projected Growth

Table 4.14-5 shows SCAG growth projections for Moreno Valley, broken down by population, households, and employment.

Table 4.14-5. SCAG Growth Projections for the City of Moreno Valley

	Existing (2018)	SCAG Projected (2040)	Increment
Population	208,297	256,600	48,303 (23.2%)
Households	52,008	73,000	20,992 (40%)
Employment	44,331	83,200	38,869 (87.7%)

Source: City of Moreno Valley 2021a.

Housing

As shown in Table 4.14-6, the City currently (2021) has a total of 57,523 housing units. The majority of housing within the City is comprised of single-family homes, representing 82.6% of the total housing supply. Single-family homes also represented the majority of new housing construction in the City between 2000 and 2020. The City's average household size of approximately 3.85 persons per household reflects its majority single-family-home types and predominantly family households in the City (City of Moreno Valley 2021a).

Table 4.14-6. 2021 Housing Units in Moreno Valley by Type

Unit Type	Total Units	
	Number	Percentage
Single-family	47,505	82.6
Multi-family	8,654	15.0
Mobile-Home	1,364	2.4
Total	**57,523**	**100**

Source: City of Moreno Valley 2021a.

Housing undersupply is often felt strongly by cost burdened households, resulting from a lack of available affordable homes. Per SCAG, across Moreno Valley's renter households, 11,649 renter households (59%) are "cost burdened" by spending 30% or more of their income on housing. This is greater than the regional average of 55.3%. Additionally, 5,688 renter households in Moreno Valley (28.8%) are "severely cost burdened," spending 50% or more of their gross income on housing. Similarly, most of the City's homeowner households are cost burdened, spending more than 30% of their income on housing.

Per the RHNA, for the 2021–2029 planning period, Moreno Valley's fair share of the regional housing growth need is 13,627 added units (City of Moreno Valley 2021a). This equates to approximately 1,703 new units annually during the 8-year planning cycle. The total allocated housing units are distributed by income category as follows: very low, 3,779 units (27.7%); low, 2,051 units (15%); moderate, 2,165 units (15.9%); and above moderate, 5,631 (47%). The 2040 General Plan Housing Element identifies adequate land capacity to meet the RHNA and identifies the Project site as "High Opportunity Area Land Available for Residential Development," meaning its development would also help further fair housing (City of Moreno Valley 2021a).

4.14.2 Regulatory Framework

Federal

There are no federal regulations regarding population and housing that are applicable to the Project.

State

California Housing Element Law

California Housing Element Law, Article 10.6 of the California Government Code Section 65580 et seq., has been established to assure the availability of decent housing and a suitable living environment for all Californians and economic segments of the community. Recognizing the vital role local governments play in the supply and affordability of housing, the California Housing Element Law mandates local communities plan for enough housing to meet projected growth in California. Each county and city is required to prepare and adopt a housing element demonstrating its planned contribution to the attainment of the state housing goal and regional housing needs. The housing element is one of seven state-mandated elements that every general plan must contain, and it is required to be updated every 5 to 8 years and determined to be legally adequate by the state.

The law acknowledges that, in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. The housing element is accordingly required to identify the community's housing

needs; identify the community's goals and objectives with regards to housing production, rehabilitation, and conservation to meet those needs; identify housing resources and constraints; project and quantify population, household, and employment trends; and define the policies and programs that the community will implement to achieve the stated housing goals and objectives. The California Housing Element Law also requires that the California Department of Housing and Community Development review local housing elements for compliance with state law and report its written findings to the local government.

California Density Bonus Law

California Density Bonus Law, Government Code Section 65915, includes requirements for local governments to provide incentives and a density increase over the otherwise maximum allowable residential density under the municipal code and the land use element of the general plan (or bonuses of equivalent financial value) when builders agree to construct housing developments with units affordable to lower or moderate-income households. The Density Bonus Law incentivizes affordable housing using a number of tools, including density bonus units, incentives and concessions, waivers or reductions of development standards, and/or reduced parking requirements for projects that incorporate a certain number of affordable units.

The state has recently passed several bills that change the state Density Bonus law, including but not limited to the following:

- Assembly Bill 1763 (Density Bonus for 100% Affordable Housing) – Density bonus and increased incentives for 100% affordable housing projects for lower income households.
- Senate Bill 1227 (Density Bonus for Student Housing) – Density bonus for student housing development for students enrolled at a full-time college, and to establish prioritization for students experiencing homelessness.
- Assembly Bill 2345 (Increase Maximum Allowable Density) – Revised the requirements for receiving concessions and incentives and the maximum density bonus provided.
- Senate Bill 290 (Density Bonus Law Amendments) – Provides concessions for projects that include student housing, provides an environmental impact is no longer a basis for denying a concession or incentive, and imposes reduced parking standards for certain projects proximate to a major transit stop.

Regional Housing Needs Assessment

An RHNA is mandated by state housing law as part of the periodic process of updating local housing elements of the general plan. The RHNA quantifies the need for housing within each jurisdiction during specified planning periods. The California Department of Housing and Community Development determines each region's housing and affordability needs, and then each region's planning body, known as a council of governments, develops methodology to allocate the housing needed to local governments. Local governments must then update their housing elements based on the schedule of the regional transportation plans prepared by the federally designated metropolitan planning organization for the region.

Communities use the RHNA in land use planning, in prioritizing local resource allocation, and in deciding how to address identified existing and future housing needs resulting from population, employment, and household growth. The RHNA does not necessarily encourage or promote growth, but rather allows communities to anticipate growth, so that collectively the region and subregion can grow in ways that enhance quality of life, improve access to jobs, promote transportation mobility, and address social equity and fair share housing needs.

Regional

SCAG Regional Housing Needs Assessment

SCAG is the nation's largest metropolitan planning organization, representing six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura), 191 cities, and more than 18 million residents. SCAG is required by state law to complete the RHNA for this region in consultation with the California Department of Housing and Community Development in order to determine the region's housing needs in four income categories: very low, low, moderate, and above moderate. The adopted 6th Cycle RHNA Allocation Plan was approved on March 22, 2021, and covers the planning period between October 2021 and October 2029. The 6th Cycle identified a need for 1,341,827 additional dwelling units within the SCAG region. Based on a methodology that weighs a number of factors (e.g., projected population growth, employment, commute patterns, and available sites), SCAG determines quantifiable needs for dwelling units in the region according to various income categories. Once the RHNA allocation is established, local jurisdictions decide how to address their housing needs through the process of updating general plan housing elements (SCAG 2020).

Of the SCAG regional allocation, 13,327 dwelling units have been assigned to the City and 167,351 dwelling units have been assigned to the County of Riverside for planning purposes (SCAG 2021). The City's projected housing need from 2021 to 2029 consists of the following :

- 3,779 very-low-income units (0%–50% of area median income)
- 2,051 low-income units (51%–80% of area median income)
- 2,165 moderate-income units (81%–120% of area median income)
- 5,631 above-moderate-income units (more than 120% of area median income)

SCAG Regional Transportation Plan/Sustainable Communities Strategy

The Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) assists in the development of long-range regional plans and strategies that provide efficient movement of people, goods, and information; enhance economic growth and international trade; and improve the environment and quality of life. The RTP/SCS must set forth a plan to meet the region's transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. As part of the RTP/SCS, SCAG develops population and housing forecasts for the SCAG region and for the jurisdictions that make up the SCAG region. SCAG's 2016-2040 RTP/SCS Growth Forecasts were relied upon by the City in adopting the current 2040 General Plan and Housing Element (SCAG 2016; City of Moreno Valley 2021a).

SCAG adopted its current RTP/SCS—"Connect SoCal"—in 2020 (SCAG 2020). Building upon and expanding land use and transportation strategies established over several planning cycles, Connect SoCal seeks to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal identifies goals to encourage diverse housing construction in areas supported by multiple transportation options; promote development of complete streets that prioritize safe opportunities to walk, bike, and pursue other forms of active transportation; leverage new transportation technologies and data-driven solution to efficient travel; and promote conservation of natural lands (SCAG 2020). The Project area is identified by SCAG as adjacent to Priority Growth Area for High Quality Transit and Livable Corridors.

Local

The 2040 General Plan was adopted June 2021 and is presently in effect. However, a pending lawsuit challenges the City's adoption of its 2040 General Plan, which could result in the invalidation of the 2040 General Plan and/or the 2040 General Plan EIR, as well as potentially the City's Certified 7th Cycle Housing Element. On September 6, 2023, the Project applicant submitted a Senate Bill 330 preliminary application and fee payment to vest or "lock in" the 2040 General Plan, as it pertains to this Project.

City of Moreno Valley General Plan 2040

The State of California requires that each city prepare and adopt a comprehensive general plan that provides guidance for the city's growth and development. The City revised its Housing Element in 2021, with a 2021–2029 Housing Element adopted in June 2021.

Housing Element

The Housing Element includes the following goals, objectives, and policies that are relevant to the Project (City of Moreno Valley 2021a):

Housing Goal 1: Availability of a wide range of housing by location, type of unit, and price to meet the existing and future needs of Moreno Valley residents.

Policy 1-1: Maintain sufficient land designated and appropriately zoned for housing to achieve a complimentary mix of single-family and multi-family development to accommodate Moreno Valley's Regional Housing Needs Assessment (RHNA) growth needs throughout the planning period.

Policy 1-2: Promote development that provide a variety of housing types and densities based on the suitability of the land, including the availability of infrastructure, the provision of adequate services and recognition of environmental constraints.

Policy 1-3: Promote mixed use developments with a residential component and locate higher density residential development in proximity to employment, shopping, transit, recreations, and other services.

Policy 1-5: Continue to work with non-profit and for-profit housing developers to assist in achieving the City's housing goals and implementing programs, coordinating on an ongoing basis and as special opportunities arise. Participation of non-profit and for-profit developers in an advisory role when implementing housing programs is desirable to help understand the needs and opportunities in the community.

Policy 1-6: Promote the construction of housing suitable for students near and in areas with good access to higher educational institutions, including Moreno Valley College.

Program 1-B: Encourage development of a variety of housing types through zoning mechanisms such as overlay zones (Senior Housing, Planned Development) and incentives. Update the density bonus incentives section of the development code to comply with State Density Bonus Law.

Program 1-C: Foster a diverse mix of housing types and densities in proximity to employment, shopping, transit, recreation, and other services by focusing new development on vacant and underutilized sites in the Center Mixed Use, Corridor Mixed Use, and Downtown Center General Plan land use designations.

Housing Goal 2: Suitable and affordable housing for persons with special needs, including housing for lower income households, large families, single parent households, the disabled, and senior citizens and shelter for the homeless.

Policy 2-1: Support innovative public, private, and non-profit efforts in the development of affordable housing, particularly for the special needs groups.

Policy 2-2: Continue to encourage the development of rental units with three or more bedrooms to provide affordable housing for large families.

Housing Goal 3: Removal or mitigation of constraints to the maintenance, improvement, and development of affordable housing, where appropriate and legally possible.

Policy 3-1: When feasible, consider reducing, waiving, or deferring development fees to facilitate the provision of affordable housing.

Policy 3-2: Periodically review and revise City development standards to facilitate quality housing that is affordable to lower and moderate-income households.

Policy 3-3: Monitor all regulations, ordinances, departmental processing procedures and fees related to the rehabilitation and/or construction of dwelling units to assess their impact on housing costs.

Policy 3-4: Ensure that water and sewer providers are aware of the City's intentions for residential development throughout the City.

Housing Goal 4: Increased opportunities for homeownership.

Policy 4-1: Pursue a variety of private, local, State and federal assistance options to support development or purchase of housing within the income limits of lower income households.

Housing Goal 5: Enhanced quality of existing residential neighborhoods in Moreno Valley, through maintenance and preservation, while minimizing displacement impacts.

Policy 5-1: Work to preserve property values, correct housing deficiencies, bring substandard units into compliance with City codes, and improve overall housing conditions in Moreno Valley.

Policy 5-2: Promote increased awareness among property owners and residents of the importance of property maintenance to long term housing quality.

Policy 5-3: Encourage compatible design of new residential units to minimize the impact of intensified reuse of residential land on existing residential development.

Policy 5-4: Preserve units affordable to lower and moderate-income households which are "at risk" of converting to market rate through County, State, and Federal funding mechanisms.

Housing Goal 6: Proactive energy conservation and waste reduction activities in all residential neighborhoods.

Policy 6-1: Promote energy conservation programs and incentives, including those offered by The County of Riverside, the Western Riverside Council of Governments, Moreno Valley Utility, Southern California Edison, and SoCalGas.

Policy 6-2: Encourage the incorporation of energy conservation design features in existing and future residential developments to conserve resources and reduce housing costs.

Policy 6-3: Encourage the use of building placement, design, and construction techniques that promote energy conservation, including green building practices, the use of recycled materials, and the recycling of construction and demolition debris. Solar panels will be required to be consistent with the ALUC Plan.

Housing Goal 7: Equal housing opportunity for all residents of Moreno Valley, regardless of race, religion, sex, marital status, ancestry, national origin, color, or handicap.

Policy 7-3: Diversify and expand the housing stock in Moreno Valley in order to better accommodate the varied housing needs of current and future residents.

Policy 7-4: Avoid the over-concentration of housing constructed expressly for lower income households in any single portion of any neighborhood.

Environmental Justice Element

The Environmental Justice Element of the 2040 General Plan addresses safe and sanitary housing as it relates to the City's provision of a safe, clean, and healthy environment for residents regardless of race, culture, or income. The Environmental Justice Element outlines the following goals, objectives, and policies that are relevant to the Project (City of Moreno Valley 2021d):

Goal EJ-2: Provide safe and sanitary housing for Moreno Valley residents of all ages, abilities, and income levels.

Policy EJ.2-1: Continue to work with developers to expand Moreno Valley's affordable housing stock, including a range of housing types that meets the needs of seniors, large and small families, low-and middle-income households, and people with disabilities.

Policy EJ.2-2: Promote mixed-income development and the inclusion of affordable housing units throughout the city.

4.14.3 Significance Criteria

The significance criteria used to evaluate Project impacts to population and housing are based on Appendix G of the CEQA Guidelines and other guidance in the CEQA Guidelines. For purposes of this SEIR, a significant impact related to population and housing would occur if the Project would:

1. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.14.4 Impact Analysis

4.14.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR determined that the single-family and mixed-use residential development described in the original SP 218 allowed for approximately 9,800 residents. The development was an infill project that proposed uses similar to those in the surrounding area; therefore, the project did not substantially alter the distribution or balance of population or housing in the area. Impacts related to population and housing were determined to be less than significant (City of Moreno Valley 1999b).

Mitigation

No mitigation was required.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR did not discuss population and housing because the supplemental documents were specifically prepared to address traffic, biological mitigation, land use, and alternatives.

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum identified a decrease in the number of expected residents. The age-restricted project described in the 2005 Addendum generated housing for approximately 5,260 residents. The age-restricted project increased potential housing available for seniors, which reduced the number of high-density units described in the City's Housing

Element from 332 to 220 and reduced the overall density of new units proposed on the Aquabella site. The substantial increase in the number of units available to seniors did not have significant adverse impacts on the City's housing stock and impacts were determined to remain less than significant (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was identified.

4.14.4.2 Project Impact Analysis

Threshold 1: Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Direct Impacts

Direct population growth occurs as a result of construction of new homes. For purposes of this analysis, the "area" is considered to be the City, since population growth and housing needs are addressed at a community-wide scale in RHNA and the City's 2040 General Plan. Population growth is not necessarily beneficial, detrimental, or of little significance to the environment; however, its inducement may result in subsequent adverse environmental effects. It is considered under CEQA for those reasons.

The Project would result in the construction of an additional 12,078 multifamily and workforce housing dwelling units for all ages and income levels as compared to the prior project approvals. The additional 12,078 residential units would have the potential to house approximately 34,664 more people compared to the prior approvals, based on an average household size of 2.87 persons per dwelling unit. A total of 43,050 people would be housed at the development (15,000 units × 2.87 persons per unit = 43,050 people).

The Project would develop a total of 15,000 multifamily and workforce housing dwelling units within the Downtown Center area in phases over a 12- to 15-year period, at a rate of approximately 1,200 units per year. As discussed above, the 2040 General Plan buildout projections estimate approximately 22,052 new dwelling units will be built in the City by 2040. The Project's 12- to 15-year construction period means that the 15,000 dwelling units would be fully built-out between 2037 and 2040. Thus, the Project would accommodate planned population growth and the housing need of 22,052 units in the City by 2040. The 43,050 people estimated to be housed within the Project would fall within the City's 2040 General Plan forecast of an additional 47,162 new City residents by 2040 (City of Moreno Valley 2021a). (For further information, please refer to Chapter 6, Other CEQA Considerations, of this SEIR.)

The RHNA has identified a total housing need of 13,627 new units in the City during the 8-year period from 2021 to 2029. Based on the estimated phasing schedule, the Project would result in approximately 4,800 dwelling units being built at the Project site during this 8-year period, which falls well within this forecast. And SCAG's 2020-2045 RTP/SCS forecasts an additional 64,900 new City residents by 2045 (SCAG 2020). Again, the 43,050 people estimated to be housed within the Project would fall within SCAG's forecast. Accordingly, the Project is anticipated to accommodate planned housing growth in the City. The City considered and analyzed the incremental growth of the Project's new housing to meet the projected housing need during the 8-year period and identified that by-right multifamily housing could occur on the Project site. Thus, the Project would contribute to the City's efforts to increase housing stock to accommodate existing and planned populations. Further, the Project

would continue to help the City meet future housing needs beyond 2029 and assist the City in meeting future RHNA allocations and housing needs. Therefore, like the prior project approvals, the current Project would be consistent with the City's population growth and housing projections. Direct impacts would be **less than significant.**

Moreover, the physical environmental effects of the Project accommodating residents on site and providing multifamily housing are evaluated throughout this SEIR.

Indirect Impacts

Indirect population growth can result from employment opportunities or from the expansion or extension of infrastructure that would support population growth. The Project would result in the creation of approximately 55,788 one-time construction jobs and approximately 1,443 permanent jobs (DTA 2023). The Project's employment opportunities are not anticipated to induce substantial population growth given the size of the labor pool existing in the City and nearby communities. Rather, the Project is anticipated to house and accommodate area workers and students. The employment patterns of construction workers in Southern California are such that it is unlikely that they would relocate their households as a consequence of the construction employment associated with the Project. Construction workers regularly commute to job sites, and many workers are highly specialized such that their specific skills are needed to complete only a particular phase of the construction process. Further, it is likely that the skilled workers needed to complete the Project already reside within the region.

Permanent jobs would mostly be associated with the Town Center land use and schools. The Project is not anticipated to cause significant numbers of people to relocate for employment purposes. Therefore, Project construction and operation is not anticipated to induce substantial unplanned population growth related to employment, and impacts would be **less than significant**.

The Project is located on an infill site surrounded by existing development on all sides. Certain utility improvements on site (water, wastewater, and dry utility) and the Nason Street realignment and construction were approved and completed under the original SP 218 and 2005 Aquabella SPA approvals. While additional utility improvements would need to be built on site to accommodate the Project, utilities would connect to existing utilities and be appropriately sized to the Project. Therefore, like the prior project approvals, the current Project would result in **less than significant impacts** related to indirect population growth.

Threshold 2: Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project site is currently vacant and undeveloped. Implementation of the Project would not displace any existing housing or people or necessitate the construction of replacement housing elsewhere. Therefore, **no impact** would occur.

4.14.5 Significance of Impacts Before Mitigation

Threshold 1: Unplanned Population Growth

Impacts related to direct unplanned population growth in an area would be **less than significant**.

Impacts related to indirect unplanned population growth would be **less than significant**.

Threshold 2: Displacement

There would be **no impact** related to the displacement of substantial numbers of existing people or housing.

4.14.6 Mitigation Measures

4.14.6.1 Previously Adopted Mitigation Measures

1999 EIR

No mitigation was required.

2003 Supplemental EIR

No mitigation was required.

2005 Addendum

No mitigation was required.

4.14.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

Impacts to population and housing were determined to be **less than significant** and no mitigation is required.

4.14.7 Significance of Impacts after Mitigation

Threshold 1: Unplanned Population Growth

Impacts would be **less than significant**.

Threshold 2: Displacement

There would be **no impact**.

4.15 Public Services

This section describes the existing public services conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and the 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in potentially significant impacts related to fire protection, police protection, and schools that would be reduced to less than significant after mitigation. Impacts to parks and other services (libraries, health service) were found to be less than significant (City of Moreno Valley 1999b, 2003, 2005b).

The following analysis of the Project's potential impacts related to public services is based on the City of Moreno Valley General Plan 2040 (2040 General Plan) [1], resources available to the public, and information and communications contained in Appendix J, Public Services Coordination.

4.15.1 Existing Environmental Conditions

Physical Conditions

The Project site is currently undeveloped. The site is accessible via Cactus Avenue, Nason Street, Iris Avenue, John F. Kennedy Drive, Brodiaea Avenue, Delphinium Avenue, and Evergreen Street. The Project site is immediately surrounded by the Riverside University Health System Medical Center, single-family and multifamily residential uses, and undeveloped land to the north; the Kaiser Permanente Hospital and medical complex, Vista del Lago High School, Vista Lomas Park, Parque Amistad, and residential uses to the south; Landmark Middle School, Celebration Park, La Jolla Elementary School, and residential uses and golf club uses to the east; and residential uses to the west. Moreno Valley College and the Moreno Valley College Library are located approximately 0.75 miles south of the Project site. Approximately 0.5 miles south of the site is the 8,800-acre Lake Perris State Recreation Area, which provides a myriad of recreational activities, including hiking, bicycling, rock climbing, horseback riding, camping, picnicking, fishing, swimming, water sports, and boating.

Fire Protection

The Project site is within the service area of the Moreno Valley Fire Department (MVFD), which provides fire protection and emergency medical services for the City of Moreno Valley (City) under contracts with the California Department of

[1] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

Forestry and Fire Protection (CAL FIRE) and the Riverside County Fire Department as part of an integrated regional fire protection system. MVFD is the primary response agency for fires, emergency medical service, hazardous materials incidents, traffic accidents, terrorist acts, catastrophic weather events, and technical rescues for the City. MVFD also provides fire prevention services including public education, code enforcement, fire investigation, and plan check and fire safety inspection services. Through its partnership with CAL FIRE and Riverside County, MVFD has access to hazardous materials response teams, fire arson investigation, fire hand crews, bulldozers, aircraft, public information and education, dispatch center, and assistance from the Riverside County Fire Office of Emergency (MVFD 2023a). MVFD has not adopted service ratios for fire department personnel or equipment, but strives to achieve National Fire Protection Association (NFPA) standards for the organization and deployment of fire suppression operations (NFPA 1710) and adjusts staffing and equipment levels as needed, based on an ongoing assessment of activity in the City and calls for service (City of Moreno Valley 2021a).

The MVFD operates from seven fire stations located throughout the City. Three existing MVFD stations are located in proximity to the Project site and could serve the Project: Station 91 (approximately 0.8 miles from Project site), Station 99 (approximately 0.9 miles from the Project site), and Station 65 (approximately 1.5 miles from the Project site) (MVFD 2023b). Facilities are located strategically in an effort to maintain a 4-minute travel time (Table 4.15-1) (City of Moreno Valley 2021a).

Table 4.15-1. Fire Stations in Proximity to the Project Site

Station	Address	Apparatus	Approximate distance from Project Site (miles)	Staffing (number and position)	Services
Station 91	16110 Lasselle Street	Paramedic Fire Engine, Fire Squad	0.8	E-91; 1 FC, 1 FAE, 1 FF S-91; 1 FAE, 1 FF	Fire, rescue, and paramedic services
Station 99	13400 Morrison Street	Paramedic Fire Engine	0.9	E-99; 1 FC, 1 FAE, 1 FF	Fire, rescue, and paramedic services
Station 65	15111 Indian Avenue	Paramedic Fire Engine	1.5	E-65; 1 FC, 1 FAE, 1FF	Fire, rescue, and paramedic services

Sources: City of Moreno Valley 2021a; MVFD 2023b; Appendix J.
Note: FC = Fire Chief; FAE = Fire Apparatus Engineer; FF =Fire Fighter.

The City's General Plan 2040 identifies six future fire stations located throughout the City (City of Moreno Valley 2021a), including a proposed station in the vicinity of the Redlands Boulevard and Cactus Avenue intersection approximately 2 miles east of the Project site and a proposed station in the vicinity of the Alessandro Boulevard and Heacock Street intersection approximately 2 miles west of the Project site.

Call volume for MVFD is approximately 19,000 calls per year for a population of 208,634 residents, most of which are emergency medical calls. This equates to a call volume of approximately 91 calls per 1,000 residents.

Acceptable service ratios and response times are recommended by the NFPA 1710, 5.2.4.1.1—Structure Fire Response Guidelines. The recommended response time is 4 minutes or less. According to personal communication with the MVFD, in 2022, MVFD met the NFPA 1710 standard 15,192 times and did not meet the standard

8,347 times. MVFD had an average Code 3 (lights and sirens are in use) response time of 4.9 minutes in 2022 (Appendix J).

Police Protection

The Moreno Valley Police Department (MVPD) provides law enforcement services to the City and Project site. The MVPD operates out of the Moreno Valley Station within the Civic Center Complex located at 22850 Calle San Juan De Los Lagos in the northwestern portion of the City, located approximately 3.9 miles from the Project site. MVPD is contracted with the Riverside County Sheriff's Department to serve the City; when operating in the City, the Sheriff operates under the MVPD name and logo (MVPD 2023a). Services and staff provided at the Moreno Valley Station are listed in Table 4.15-2.

Table 4.15-2. Police Stations in Proximity to the Project Site

Station	Address	Approximate distance from Project Site (miles)	Staffing (number and position)	Services
Moreno Valley Station	Civic Center Complex, 22850 Calle San Juan De Los Lagos	3.9	1 chief 7 lieutenants 20 sergeants 12 investigators 171 deputies 55 support staff	Police chief Managers Supervisors Investigations Patrol/traffic Special Team Office/Accounting, etc.

Source: Appendix J.

MVPD provides a full range of police protection services, including general law enforcement, traffic enforcement, investigations, and routine support services such as communications, evidence collection, analysis and preservation, training, administration, and records keeping. MVPD also provides law enforcement services at the Riverside County Regional Medical Center and schools in the City.

MVPD utilizes a zone policing strategy to improve response times by connecting officers with assigned areas. The Project site is located in Zone 4, which is inclusive of the eastern portion of the City (MVPD 2023b). MVPD employs a citywide camera surveillance system to remotely monitor parks and other key locations; uses computer-aided dispatch and a records management system that allows rapid access to crime data; and uses digital cameras and automated license plate readers in patrol cars. Increased use of technology permits the MVPD to enhance public safety without adding police officers.

In the future, the City plans an expansion of the current police station to accommodate additional personnel, as well as completion of a new satellite police substation in the southeastern part of the City near the Project site (City of Moreno Valley 2021a).

The MVPD has a stated objective of maintaining a ratio of 1 deputy per 1,000 residents, which is currently being achieved (Appendix J). The MVPD has a goal of increasing the ratio over time to meet and maintain a ratio of 1.75 deputies per 1,000 residents.

Schools

The Moreno Valley Unified School District (MVUSD) provides public primary and secondary education in the City and would serve residents of the Project site. The MVUSD includes 23 elementary schools, 6 middle schools, 5 high schools, and 9 specialized schools for a total of 43 schools. For the 2021–2022 school year, MVUSD served 31,609 students (CDE 2022). Student enrollment at MVUSD has decreased by 11% since 2009 (City of Moreno Valley 2021b). Student generation, per Government Code Section 65995.6, is based on historical student generation rates of new residential units constructed during the previous 5 years that are of a similar type to those anticipated to be constructed in the next 5-year period (MVUSD 2021). The most current student generation rates per multifamily attached housing unit in the MVUSD are 0.1961 for elementary students, 0.0343 for middle school students, and 0.0196 for high school students (MVUSD 2021).

As shown in Table 4.15-3, based on the current district boundaries, the Project site would be served by La Jolla Elementary School, Landmark Middle School, and Vista Del Lago High School (MVUSD 2023).

Table 4.15-3. Schools that Would Serve the Project Site

School	Address	Grades	Enrollment (2021–2022)	Enrollment (2023–2024)	Capacity (2023–2024)
La Jolla Elementary School	14745 Willow Grove Place	K–5	668	711	950 with portable classrooms; 825 without portables
Landmark Middle School	15261 Legendary Drive	6–8	850	853	1,485 with portables; 1,323 without portables
Vista Del Lago High School	15150 Lasselle Street	9–12	2,028	1,983	2,646 with portables; 1,890 without portables

Sources: MVUSD 2023; La Jolla Elementary School 2022; Landmark Middle School 2022; Vista Del Lago High School 2022; Appendix J.

Post-secondary education within Moreno Valley is offered primarily at Moreno Valley College, located 1 mile south of the Project site.

Parks

Parks and recreational facilities within the City are maintained and operated by the Parks and Community Services Department. Facilities include 7 community parks, 24 neighborhood parks, 4 specialty parks, and 15 miles of trails/greenways totaling 482 acres of parkland (City of Moreno Valley 2021a). In addition to this City parkland and trail system, residents also have access to an array of regional parks and open spaces, including the Lake Perris State Recreation Area (approximately 1 mile south of the Project site), San Jacinto Wildlife Area (approximately 3 miles east and south of the Project site), Box Springs Mountain Park (approximately 5.25 miles north of the Project site), and Norton Younglove Reserve (approximately 4 miles northeast of the site) (City of Moreno Valley 2023a). The 8,800-acre Lake Perris State Recreation Area provides diverse recreational activities including hiking, bicycling, rock climbing, horseback riding, camping, picnicking, fishing, swimming, water sports, and boating.

The City has established a minimum park service standard of 3 acres of parkland per 1,000 residents. As of 2020, the population of Moreno Valley was 208,634 people (U.S. Census Bureau 2020), resulting in approximately 2.6 acres of parkland per 1,000 residents. The City has identified that an additional 67.69 acres of land for five new park facilities are needed in order to meet the established service ratio under existing conditions in locations near where new housing is envisioned. New residential developments will be required to dedicate land for new park facilities and/or pay an in-lieu fee that can be used for acquisition of parkland as needed to meet the communitywide standard.

There are five neighborhood parks (Woodland, Parque Amistad, Vista Lomas, Celebration, and Fairway Neighborhood Parks) located in close proximity to the Project site, which provide a variety of amenities as described in Table 4.15-4 (City of Moreno Valley 2021a).

Table 4.15-4. Parks in Proximity to the Project Site

Park	Address	Proximity to project site (mi)	Size (acres)	Amenities
Woodland Neighborhood Park	25705 Cactus Ave	0.24	9.11	Barbecues, four lit basketball courts, pickleball court, picnic tables, playground, lit softball/baseball fields, four lit tennis courts
Parque Amistad Neighborhood Park	Caballo Rd	0.19	4.24	Barbecues, lit basketball court, lit multi-use athletic field, picnic tables, playground
Vista Lomas Neighborhood Park	26700 Iris Ave	0.15	4.00	Barbecues, lit basketball court, picnic tables, playground
Celebration Neighborhood Park	14965 Morgan Ave	0.15	6.65	Barbecues, lit basketball court, picnic tables, playground, walking path, water feature
Fairway Neighborhood Park	27891 John F. Kennedy Drive	0.25	5.0	Barbecues, multi-use athletic field, picnic tables, restrooms, security lighting, soccer field, tot lot, volleyball court

Source: City of Moreno Valley 2021a.

Other public facilities

The City operates three public library locations: the Main Library at 25480 Alessandro Boulevard, the Moreno Valley Mall Branch at 22500 Town Circle, and Iris Plaza Branch at 16170 Perris Boulevard. The City's public libraries offer services to the community including eBooks, public computers with internet access, and wi-fi (City of Moreno Valley 2023b). The closest public library to the Project site is the Main Library, which is approximately 0.80 miles to the northwest.

The Moreno Valley College Library is also located approximately 1 mile south of the Project site, offering a variety of services and resources to students, employees, and the surrounding community.

4.15.2 Regulatory Framework

Federal

There are no applicable federal plans, policies, or ordinances.

State

California Fire Code

The California Fire Code and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The California Fire Code also establishes minimum requirements that would provide a reasonable degree of safety from fire, panic, and explosion.

California Code of Regulations Title 24, Part 2 and Part 9

Part 2 of Title 24 of the California Code of Regulations refers to the California Building Code, which contains regulations and general construction building standards of state adopting agencies, including administrative, fire, and life safety and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains fire safety-related building standards referenced in other parts of Title 24. This code is preassembled with the 2000 Uniform Fire Code of the Western Fire Chiefs Association. This code was revised in January 2008 with a change in the base model/consensus code from the Uniform Fire Code series to the International Fire Code.

California Mutual Aid

The purpose of Emergency Management Mutual Aid is to provide emergency management personnel and technical specialists to support the disaster operations of affected jurisdictions during an emergency. In accordance with the California Master Mutual Aid Agreement, local and state emergency managers have responded in support of each other under a variety of plans and procedures. Immediately following the 1994 Northridge Earthquake, city and county emergency managers, along with the Coastal, Inland, and Southern Regions of the California Governor's Office of Emergency Services, developed Emergency Management Mutual Aid to provide a valuable service during the emergency response and recovery efforts at the Southern Region Emergency Operations Center, local emergency operations centers, the Disaster Recovery Center, local assistance centers, and in the field. Since that time, Emergency Management Mutual Aid has often been used to deploy emergency managers and other technical specialists not covered by law enforcement or fire mutual aid plans in support of emergency operations and response throughout California.

Senate Bill 50 – Leroy F Greene Schools Facilities Act of 1998

Senate Bill (SB) 50, or the Leroy F. Greene School Facilities Act of 1998, restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. Payment of school fees is required by SB 50 for all new residential development projects and is considered full and complete mitigation of any school impacts (Government Code Section 65996). As required by SB 50, school impact fees are payments to offset capital cost impacts associated with new developments, which result primarily from costs of additional facilities, related furnishings and equipment, and projected capital maintenance requirements.

As such, agencies cannot require additional mitigation for any school impacts. School impact fees and fees collected pursuant to SB 50 are collected at the time when building permits are issued.

Quimby Act and Assembly Bill 1359

The Quimby Act, which is within the state's Subdivision Map Act, authorizes the legislative body of a city or county to require the dedication of land or to impose fees for park or recreational purposes as a condition of the approval of a tentative or parcel subdivision map, if specified requirements are met. One of these requirements is that the dedicated land or fees, or combination thereof, shall be used only for the purposes of developing or rehabilitating neighborhood or community park or recreational facilities to serve the subdivision for which the land was dedicated or fees were paid. The act provides that the dedication of land or the payment of fees, or both, shall not exceed the proportionate amount necessary to provide 3 acres of park area per 1,000 persons residing within a subdivision subject to the act, except as specified.

California Government Code, Section 66000.5 – Mitigation Fee Act

The Mitigation Fee Act complements the Quimby Act by allowing separate impact and recreation facilities fees to be collected so that parks can be improved and recreation facilities can be maintained. The act also allows impact fees to be placed on non-subdivision residential developments.

Local

City of Moreno Valley General Plan 2040

Parks and Public Services Element

The City's 2040 General Plan Parks and Public Services Element provides a framework for decision making and investment in public services within the City. The Parks and Public Services Element identifies the Project site as encompassing a "Potential Central Park Location." This Central Park is intended to provide passive and active amenities, serve as an amenity and focal point for the community and visitors, and ensure easy access to park facilities for future residents. The following relevant goals and policies are also identified in the Park and Public Services Element and are applicable to the Project (City of Moreno Valley 2021a):

Goal PPS-1: Provide and maintain a comprehensive system of quality parks, multi-use trails, and recreational facilities to meet the needs of Moreno Valley's current and future population.

Policy PPS.1-1: Increase the acreage of parks in Moreno Valley to serve the needs of the growing population and maintain a standard of three acres of parkland per 1,000 residents.

Policy PPS.1-2: Require that proponents of new development projects contribute to the acquisition and development of adequate parks and recreational facilities within the community, either through the dedication of park land and construction of facilities, or the payment of in-lieu fees.

Policy PPS.1-3: Locate new parks in the generalized locations shown on Map PPS-1 so that all residents have easy access to a park from their home. New parks should be located outside of the 65dbl noise contour (see Map N-3) and be accessible by transit.

Policy PPS.1-4: Design and construct parks, public spaces and recreational facilities for flexible use, energy efficiency, adaptability over time, and ease of maintenance.

Policy PPS.1-5: Use site design, landscaping, lighting, and traffic calming measures to create safe parks and open spaces integrated with adjacent developments.

Policy PPS 1.6: Prioritize the maintenance and, where feasible, improvement of parks and recreational facilities to ensure safe, attractive facilities that are responsive to community needs.

Policy PPS.1-7: Provide on-going opportunities for public involvement and input into the park planning process, including priorities for amenities, facilities, programming, and improvements.

Policy PPS.1-9: Design and construct the multi-use trail network to connect parks, plazas, and open spaces within the community and promote access to these spaces.

Action PPS.1-A: Prioritize the creation of a Central Park facility in the Downtown Center large enough to serve as an amenity and a focal point for the whole community and a draw for visitors from the wider region.

Policy PPS.2-3: Whenever feasible, co-locate City facilities with other public facilities (schools, post offices, hospitals/clinics) so that multiple services may be delivered from a single location.

Goal PPS-3: Provide for responsive police and fire services that ensure a safe and secure environment for people and property.

Policy PPS.3-1: Provide responsive, efficient, and effective police services that promote a high level of public safety.

Policy PPS.3-2: Provide fire prevention and emergency response services that minimize fire risks and protect life and property, including fire prevention, fire-related law enforcement, and public education and information programs.

Policy PPS.3-3: Locate and maintain police and fire equipment, facilities, and staffing at locations and levels that allow for effective service delivery.

Policy PPS.3-5: Monitor the pace and location of development in Moreno Valley and coordinate the timing of fire station construction or expansion to the rise of service demand in surrounding areas.

Policy PPS.3-6: Continue to require that new development make a fair share funding contribution to ensure the provision of adequate police and fire services.

Policy PPS.3-7: Continue to engage the Police and Fire Departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for criminal activity and fire hazards and maximizes the potential for responsive police and fire services.

Policy PPS.3-8: Apply Crime Prevention through Environmental Design principles in the design of new development and encourage the provision of adequate public lighting; windows overlooking streets

or parking lots; and paths to increase pedestrian activity within private development projects and public facilities in order to enhance public safety and reduce calls for service.

Safety Element

The following relevant goals and policies are from the Safety Element are applicable to the Project (City of Moreno Valley 2021c):

Policy S.1-19: Cooperate with the Riverside County Fire Department and CALFIRE to ensure that all portions of the Planning Area are served and accessible within an effective response time and to address regional wildfire threats.

Policy S.2-3: Locate critical facilities, such as hospitals and health care facilities, emergency shelters, fire stations, police stations, emergency command centers, and other emergency service facilities and utilities so as to minimize exposure to flooding, seismic, geologic, wildfire, and other hazards.

Policy S.2-6: Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for criminal activity and fire hazards and maximizes the potential for responsive police and fire services.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

Moreno Valley Municipal Code

Chapter 3.38: Residential Development Impact Fees

Chapter 3.38 of the City's Code of Ordinances covers all impact fees imposed by the City as a condition of development approval to recover the new development's reasonable share of the cost of each type of public facility and infrastructure improvements. Fees provide funding for circulation improvements, public services, recreational services, public facilities, and credits for improvements provided by developers, including as relates to fire protection services and law enforcement services.

Chapter 3.40: Dedication of Land for Park Facilities and Payment of In-Lieu Fees

Chapter 3.40 of the City's Code of Ordinances covers the implementation of the provisions of the Quimby Act. This allows the City to require the dedication of land for park and recreational facilities or a payment of an in-lieu fee as a condition of project approval.

Moreno Valley Unified School District School Developer Impact Fees

New development that is located within the MVUSD boundary is required to pay development impact fees to provide a fair share contribution towards the development and maintenance of school facilities.

Moreno Valley Fire Department Strategic Plan

The MVFD Strategic Plan identifies goals for Fire Operations, Fire Prevention, and Office of Emergency Management for the MVFD over a 10-year period to serve as a directional document for the future of the department. The following goals are outlined in the plan (MVFD 2011):

Fire Operation Goals

- **Goal 1:** Financial Management and Accountability
- **Goal 2:** Arrive On Scene within 5 Minutes of Dispatch 90% of the Time
- **Goal 3:** Reduce the Risk of Fire to Residents through Prevention Campaigns and Mitigation Efforts
- **Goal 4:** Maintain a Strong Partnership with Riverside County Fire Department
- **Goal 5:** Ensure Fire Administration Staffing is Sufficient for the Needs of the Department

Fire Prevention Goals

- **Goal 1:** Fiscal Sustainability
- **Goal 2:** Ensure All Business and Commercial Occupancies Receive Annual Fire and Life Safety Inspections
- **Goal 3:** Perform Hazard Abatement Inspections Bi-Annually
- **Goal 4:** Provide Efficient Plan Review
- **Goal 5:** Evaluate Management Structure and Career Advancement within the Bureau

Office of Emergency Management Goals

- **Goal 1:** Provide Training to Employees and Citizens
- **Goal 2:** Incorporate Federal and State Legal Mandates and Standards into City Emergency Management Strategies
- **Goal 3:** Continually Improve Emergency Operations Center Functions and Capabilities Based on a Comprehensive Assessment
- **Goal 4:** Manage FEMA and State Disaster Recovery Projects to Ensure Timely Completion of Required Documentation
- **Goal 5:** Maintain Effective Coordination and Partnerships with Local, Regional, and State Agencies

4.15.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to public services are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G, a significant impact related to public services would occur if the Project would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
   - Fire Protection
   - Police Protection

- Schools
- Parks
- Other public facilities

4.15.4 Impact Analysis

4.15.4.1 Summary of Previous Impact Analyses

1999 EIR

Impacts of the original SP 218 on public services were analyzed in the 1999 EIR (City of Moreno Valley 1999b). The original SP 218 proposed to develop 2,922 single-family units, a 148.7-acre golf course, 25 acres of retail/commercial uses, an 81.7-acre school and recreational complex, and a 25.9-acre community park. The original SP 218 also included drainage and infrastructure improvements on the project site.

Fire Protection Services

Analysis

The 1999 EIR discussed the original SP 218's impact on fire services, evaluating the potential increase in fires, fire flows servicing the project site, and fire response times. The original SP 218 was determined to increase the potential for structure fires compared to the existing agricultural uses in the Specific Plan Area. The 1999 EIR found that the original SP 218 would maintain the then-current General Plan Objective 19 standard for a 5-minute fire response time, and that fire services would be able to ensure adequate fire flows to the site with the approval from City of Moreno Valley Fire Protection District of all water mains and fire hydrants. The 1999 EIR determined that impacts to fire protection services would be potentially significant due to the need for additional services to accommodate the proposed development.

Mitigation

To reduce potential impacts to fire protection services, Mitigation Measure 17 was adopted, which required a fair share contribution toward an additional fire station and fire engine as conditions of approval of the original SP 218 or a development agreement. The 1999 EIR determined that, with the incorporation of Mitigation Measure 17, impacts to fire protection services would be less than significant.

Police Services

Analysis

The 1999 EIR found that the original SP 218's increase of 9,800 residents would result in the need for 10 new police officers (plus support personnel and equipment) to meet the City's then-current General Plan Objective 13.0 ratio of one police officer for every 1,000 residents. The 1999 EIR identified that MVPD was not meeting the police officer ratio identified in Objective 13.0 and that the police department only provided 0.87 officers per resident at the time. Objective 13.0 also included a response time standard of 5 minutes or less. The 1999 EIR determined that police response times would not be significantly impacted by the original SP 218. The 1999 EIR determined that impacts to police services were potentially significant due to the need for 10 additional officers.

Mitigation

To reduce the potential impacts to police services, Mitigation Measure 17 was adopted, which required a fair share contribution toward a fire station and fire engine as conditions of approval of the Specific Plan or a development agreement. The 1999 EIR determined that, with the incorporation of Mitigation Measure 17, impacts to police services would be less than significant.

Schools

Analysis

The 1999 EIR found that the original SP 218 would generate a projected 2,360 students. The 1999 EIR determined that impacts to schools, without the addition of new facilities, would be potentially significant absent mitigation.

Mitigation

To reduce the potential impacts to schools, the 1999 EIR proposed Mitigation Measure 18, which required the formation of a Mello-Roos District, payment of fees, and dedication of land to accommodate the construction and operation of two elementary schools, one middle school, and one high school. The 1999 EIR determined that with the incorporation of Mitigation Measure 18, impacts to schools would be less than significant.

Parks

Analysis

The 1999 EIR evaluated the original SP 218's impacts on parks, finding that the 51.1 acres of parkland proposed as part of the original SP 218 would provide enough parkland to meet the goals of the City's then-current General Plan of 2.5 acres each of neighborhood and community parkland per 1,000 people. It determined that impacts on parks were less than significant.

Mitigation

No mitigation was required.

Other Public Facilities

Analysis

The 1999 EIR found that the increase of 9,800 residents would increase the demand for library services by 3,430 square feet and 14,700 books. Library service within the City was identified as being below the then-current General Plan standard for libraries. The 1999 EIR determined that impacts to libraries would be less than significant with the payment of existing fees.

The 1999 EIR identified that the project would not substantially impact health services because the scheduled development of the Riverside County General Hospital and the existing Moreno Valley Community Hospital would adequately serve the original SP 218 resident and employee population. Impacts to health services were determined to be less than significant.

Mitigation

No mitigation was required.

2003 Supplemental EIR

The 2003 Supplemental EIR for the original SP 218 addressed traffic and biological impacts. The analysis of impacts to public services was not changed as part of the 2003 Supplemental EIR (City of Moreno Valley 2003).

2005 Addendum

The 2005 Aquabella SPA amended the original SP 218 to provide that, of the 2,922 residential units proposed, 2,702 units be age-restricted development for people that are 55 years old and older and 220 be market-rate. Additionally, the 2005 Aquabella SPA eliminated the schools (except for the already developed Vista del Lago high school), planned for a 300-room hotel, and replaced the previously approved golf course with an approximately 40–acre lake complex. The 2005 Addendum, Section 6.11, evaluated any changes in the environmental analysis related to public services compared to the 1999 EIR (City of Moreno Valley 2005b).

Fire Protection Services

Analysis

The 2005 Addendum evaluated the change in demand for fire protection services compared to the original SP 218. The 2005 Addendum determined that the 2005 Aquabella SPA would potentially increase the demand on fire services due to the age-restricted development, due to an estimated increase in the number of calls and the time spent on calls for medical calls.

Mitigation

Mitigation Measure 17 from the 1999 EIR required a fair share contribution toward an additional fire station and fire engine as conditions of approval of the original SP 218 or a development agreement. The 2005 Addendum modified Mitigation Measure 17 to include the addition of one engine crew at Fire Station 91 to support the additional demand proposed by the 2005 Aquabella SPA changes. Impacts were determined to remain less than significant with this revised mitigation.

Police Services

Analysis

The 2005 Addendum discussed that the age restricted housing proposed by the 2005 Aquabella SPA would be expected to result in a decrease in the need for police services compared to the original SP 218. Additionally, the 2005 Aquabella SPA proposed an on-site security office that would assist residents. The 2005 Addendum did not identify any significant changes in impacts to police services, and impacts were determined to remain less than significant with the incorporation of Mitigation Measure 17.

Mitigation

No further changes to Mitigation Measure 17 were proposed.

Schools

Analysis

The 2005 Addendum discussed that the age-restricted housing proposed by the 2005 Aquabella SPA would result in reduced impacts on schools compared to the non-age-restricted housing proposed with the original SP 218. The 2005 Addendum did not identify any changes in impacts to schools, and impacts were determined to remain less than significant with the implementation of Mitigation Measure 18.

Mitigation

No changes to Mitigation Measure 18 were proposed.

Parks

Analysis

The 2005 Addendum did not identify any changes in impacts to parks. Impacts would remain less than significant.

Mitigation

No mitigation was required.

Other Public Facilities

Analysis

The 2005 Addendum did not identify any changes in impacts to library facilities or health services. Impacts would remain less than significant.

Mitigation

No mitigation was required.

4.15.4.2 Project Impact Analysis

The Project would introduce an additional 12,078 multifamily housing units to the Project site compared to the prior approvals, for a total of 15,000 units. Like the 2005 Aquabella SPA, the Project includes 40 acres of lakes. An additional 40 acres of parks and a lake promenade are also proposed. A total of 25 acres of commercial uses continue to be proposed, as with the original SP 218 and similar to the 2005 Aquabella SPA.

The Project designates 40 acres for school use, with up to three elementary school sites and one middle school site, which is 10 acres more than the original SP 218 after accounting for the completed 50-acre Vista del Lago High School campus. Project components that were previously approved under the 2005 Aquabella SPA are not analyzed as part of this document. Impacts to public services based on the changes proposed by the Project are analyzed below.

Threshold 1: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire Protection

Police Protection

Schools

Parks

Other public facilities?

Fire Protection

The Project proposes multifamily residential development, mixed-use and commercial development, school facilities, and parks/open space. The Project would result in an increase of 12,078 dwelling units compared to the previously approved 2005 Aquabella SPA. Per the Western Riverside Council of Governments, the persons-per-household average for the western Riverside region is 2.87 persons per household for multifamily units (WRCOG 2021). Using this rate, the Project would increase the population on the Project site by approximately 34,664 people, for a total population of 43,050 people on site compared to the estimated 8,386 residents resulting from the approved 2005 Aquabella SPA. The commercial uses, school uses, and park/open space uses would be similar to the prior analysis in the 1999 EIR, although student and school employee numbers would be higher than considered in the 2005 Addendum. Overall, the increased residential population would result in increased call volumes and demand for fire protection services compared to prior analyses.

According to MVFD, three existing fire stations are located in proximity to the Project site, as shown in Table 4.15-1 (Appendix J) (MVFD 2023b). The information from MVFD indicates adequate response times in the City are considered to be 4 minutes or less and that additional facilities may be needed to accommodate the Project.

The primary standard used in the City to determine adequate levels of fire protection service is emergency response travel time. Fire protection facilities are located strategically in an effort to maintain the City's 4-minute travel time goal, which does not include turnout time (City of Moreno Valley 2021a). Emergency travel times for first arriving engine from the fire stations identified in Table 4.15-1 to the Project site are shown in Table 4.15-5. Travel distance is derived from Google road data, while travel times are calculated using the Insurance Services Office Public Protection Classification Program's Response Time Standard formula (Time = 0.65 + 1.7[Distance]). The Insurance Services Office response travel time formula discounts speed for intersections and vehicle deceleration and acceleration and does not include turnout time. Turnout time is assumed to add 2 minutes to the response times identified in Table 4.15-5.

Table 4.15-5. Fire Stations Response Time to the Project Site

Station	Travel Distance to Closest Project Entrance (mi)	Response Time (Without Turnout Time)	Travel Distance to Farthest Project Entrance	Response Time (Without Turnout Time)
Station 91	1.2 (Nason Street and Iris Avenue	2 minutes 41 seconds	1.9 (phase 6 entrance on Cactus Avenue)	3 minutes 53 seconds
Station 99	1.6 (Cactus Avenue and Nason Street)	3 minutes 22 seconds	2.6 (Nason Street and Iris Avenue)	5 minutes 4 seconds
Station 65	1.6 (John F Kennedy Drive and Lasselle Street)	3 minutes 22 seconds	3.9 (Evergreen Street and White Box Lane)	7 minutes 17 seconds
Proposed Redlands Boulevard Station	2.1 (Cactus Avenue and Nason Street)	4 minutes 13 seconds	3.6 (John F Kennedy Drive and Lasselle Street)	6 minutes 42 seconds

As shown in Table 4.15-5, three fire stations and one proposed fire station are or will be located in proximity to the Project site. Primary entrances to the Project site are located on Cactus Avenue, Nasion Street, Iris Avenue, John F. Kennedy Drive, and Laselle Street. As discussed in Section 4.17, Transportation, consistent with the City's Engineering Standards, Project roadways would be designed to ensure adequate emergency access, including access requirements, roadway widths, all-weather surface requirements, length of streets, turning requirements, grade restrictions, maintenance requirements, and parking restrictions. Specific fire and life safety requirements would be addressed at the building permit phase when architectural plans are submitted for City review and approval. Adequate emergency access and compliance with emergency access and design standards would be ensured through this review by the City and responsible emergency service agencies throughout Project implementation.

Table 4.15-5 shows that Stations 91, 99, and 65 would be able to meet the 4-minute travel time goal to the closest Project entrance to serve the Project from entrances located on all sides of the Project site: Nason Street and Iris Avenue, Cactus Avenue and Nason Street, and John F. Kennedy Drive and Lasselle Street (see the Travel Distance to Closest Project Entrance column in Table 4.15-5). Station 91 would be able to reach the most distant entrance of the Project site—and thus serve the entire Project site—within the 4-minute time goal (Table 4.15-5, in the Travel Distance to Farthest Project Entrance column, shows 3 minutes and 53 seconds). Further, once completed, the Project would introduce new streets on site, which would provide more direct and accessible routes for fire response to calls located within the Project site. The fire station in closest proximity to a call would be anticipated to provide primary fire response, with more distant stations providing secondary and supporting responses. Thus, new or expanded fire protection facilities would not be needed in order to maintain acceptable response times.

Further, the MVFD Strategic Plan identifies two proposed stations that would be developed in the southern and southeastern portion of the City to provide fire protection (MVFD 2011). The proposed Redlands Boulevard Station would be located approximately 1.75 miles from the Project site. Once completed, this station would be able to reach the closest entrance to the Project in just over 4 minutes and the most distance entrance in under 7 minutes,

as shown in Table 4.15-5. This new station would provide additional secondary and supporting responses to the existing three stations in the Project vicinity.

Finally, in addition to MVFD stations, MVFD has a mutual aid agreement with Riverside County Fire through their partnership with CAL FIRE to provide additional fire support. Such additional resources are not analyzed in this report, but would assist in ensuring timely fire and paramedic response.

Implementation of the Project would substantially increase the number of people on the Project site that would use fire protection services, which may require additional personnel, equipment, and/or facilities in order to maintain acceptable response times or meet other performance objectives for fire protection. Consistent with the original SP 218 and the 2005 Aquabella SPA, the Project would be conditioned to pay the appropriate development impact fee (DIF) for future facility improvements to ensure payment of its fair share cost of facilities and equipment, consistent with the City's Municipal Code and Fee Schedule, Section 3.38.060 of the Municipal Code. Fees would be used for acquiring, designing, constructing, improving, providing, and maintaining fire facilities in the City. The location, design, and staffing of fire facilities would involve coordination between several agencies, including MVFD, the City, and CAL FIRE. Should new development or expansion of fire facilities occur, such improvements would be subject to compliance with applicable laws, including environmental review and mitigation pursuant to CEQA and approval by the City fire department as to sizing, location, and need.

Finally, as discussed in Section 4.19, Utilities and Service Systems, Project connections to the water system would ensure adequate fire flow pressure and water availability is maintained throughout the site. Other fire protection mechanisms are discussed in Section 4.20, Wildfire. To address fire and life safety issues on new development, MVFD reviews proposed projects through the development review process to ensure adequate fire hydrant locations, water flow pressures, access for emergency vehicles, and other requirements are met, which would also reduce the need for fire protection services. Therefore, impacts to fire protection services would be less than significant with compliance with Project conditions.

Police Protection

As described above, the Project would result in an increase of 12,078 dwelling units and approximately 34,664 people compared to the 2005 Aquabella SPA and original SP 218. The Project would increase the call volumes to the MVPD and increase demand for police services compared to what was previously analyzed.

According to the 2040 General Plan, the MVPD's Patrol Division provides first responders to crimes in progress and to calls for service assigned by dispatch. The unit contains 9 supervising sergeants, 64 sworn patrol officers, 3 K-9 teams, and 10 non-sworn officers. MVPD's target response time for Priority 1 calls is 6 minutes. Current response time for Priority 1 calls is 6 minutes and 37 seconds (City of Moreno Valley 2021a).

According to MVPD, existing police facilities would be sufficient to provide the Project with police protection services. However, the MVPD is currently outgrowing its facilities at the Moreno Valley Station (which is capable of accommodating roughly 600 personnel) and, with its continuous expansion on the east side of the City, response times could be delayed (Appendix J). Thus, the 2040 General Plan explains the City plans to expand the current police station to accommodate additional personnel and complete a new satellite police substation in the southeastern part of the City near the Project site to accommodate demand in the eastern portion of the City (City of Moreno Valley 2021a). The completion of new and expanded facilities would be subject to compliance with the law, including CEQA, and would be required to adopt mitigation for any identified significant environmental impact. Further, MVPD plans to continue to invest in technology and resources to expand the camera system, implement

advanced license reading applications, and offer video crime reporting services that allow residents to contact MVPD and interact with officers in real-time, which will reduce crime and the burden on MVPD.

The anticipated increase in population density in the Project area could require additional personnel or additional police protection in the south of the City. However, the City has planned for growth in this area, and the increase in calls would not be anticipated to result in the need for new police facilities beyond those outlined in the 2040 General Plan. The Project would be required as a condition of approval to pay the appropriate DIF consistent with the City's Municipal Code and Fee Schedule, Section 3.38.070 of the Municipal Code. Fees will be used for acquiring, designing, constructing, improving, providing, and maintaining police facilities.

Further, the Project would be designed to enhance safety through compliance with the City's outdoor lighting standards and roadway engineering standards and through consistency with the General Plan design guidelines. This safe design would reduce the demand on police services. Therefore, with the Project's DIF payment, the potential impact related to the physical expansion or construction of new police facilities would be **less than significant.**

Schools

The Project would increase demand for school facilities beyond what was previously evaluated, through the development of additional residential dwelling units. As described above, the Project would result in an increase of 12,078 dwelling units compared to the previously approved 2005 Aquabella SPA. The original SP 218 was estimated to yield 2,360 school students, while the 2005 Addendum was anticipated to generate fewer students due to the proposed senior age restriction.

As shown in Table 4.15-6, full buildout of the Project is anticipated to generate approximately 2,941 elementary school students, 514 middle school students, and 294 high school students based on current student generation rates—a total of 3,750 students. Based on the current district boundaries, the Project site would be served by La Jolla Elementary, Landmark Middle School, and Vista Del Lago High School (refer to Table 4.15-3).

Table 4.15-6. Student Generation Rate and School Capacity

School Type	Student Generation Rate (student/ dwelling unit)	Dwelling Units Generated by Project	Estimated Number of Students Generated by Project[1]	School Type Capacity	Existing Capacity at Schools Serving Project[2]	Remaining Need	Number of Schools Required
Total Dwelling Units							
Elementary School	0.1961	15,000	2,941.5	800	239	2,702.5.5	3.38
Middle School	0.0343	15,000	514.5	1,200	632	0	0
High School	0.0196	15,000	294	2,500	663	0	0
		Total	**3,750**	—	—	—	**3.38**
Additional Dwelling Units							
Elementary School	0.1961	12,078	2,368.5	800	239	2,129.5	2.66
Middle School	0.0343	12,078	514.5	1,200	632	0	0

Table 4.15-6. Student Generation Rate and School Capacity

School Type	Student Generation Rate (student/ dwelling unit)	Dwelling Units Generated by Project	Estimated Number of Students Generated by Project[1]	School Type Capacity	Existing Capacity at Schools Serving Project[2]	Remaining Need	Number of Schools Required
High School	0.0196	12,078	237	2,500	663	0	0
		Total	**3,120**	—	—	—	**2.66**

Notes:
1 Rounded
2 Capacity range based on unofficial 2023–2024 enrollment numbers via Appendix J. Capacity is considered with current portable classrooms.

As shown in Table 4.15-6, La Jolla Elementary School was under capacity for the 2023–2024 school year with the inclusion of portable classrooms. If existing conditions continued, there would be room for approximately 239 students at the existing elementary school, which would not fully accommodate the Project elementary student generation of 2,368.5 students. Landmark Middle School was under capacity (1,485 students) for the 2023-2024 school year. Landmark Middle School would have capacity to fully accommodate the 514.5 middle-school students generated by the Project if existing conditions continue. Vista Del Lago High School would be able to accommodate the Project's 237 high-school students considering its existing enrollment (1,983 students) and total capacity (2,500 students).

Given the estimated capacity and Project student generation, an additional 2.66 elementary schools would be needed to meet the additional demand upon Project buildout. In consultation with MVUSD, MVUSD has indicated that the Project would likely result in the need for two new elementary schools, and additions or expansion to the existing Landmark Middle School and Vista del Lago High School in order to meet the needs of the additional students (Appendix J). MVUSD has indicated that future improvements at Landmark Middle School and Vista del Lago High School to replace existing portable classrooms with classroom/lab additions may be completed to accommodate the Project's student population, which would be funded by the required DIF/school impact fees. (Appendix J).

The Project includes the proposed development of 40 acres of schools, including up to three elementary schools and one middle school, at the site. This would exceed the demand generated by full buildout conditions of the Project, such that further modification or expansion to accommodate additional students from the Project is not anticipated. In addition, the Project would be conditioned to pay the required DIF/ school impact fees in accordance with SB 50 at the time of building permit issuance.

Accordingly, implementation of the Project would include development of up to three elementary schools and one middle school, exceeding the need of students generated by the Project upon full buildout, which would require 2.66 elementary schools. Further, payment of mandatory school impact fees in accordance with SB 50 would mitigate potential impacts to school facilities from the Project. Thus, impacts would be **less than significant.**

Parks

As described above, the City's General Plan establishes an objective to provide a minimum of 3 acres of parkland per 1,000 residents in the City. The City currently provides 540 acres of City parkland. As of 2020, the City does not meet the 3 acres of parkland per 1,000 resident goal, providing approximately 2.6 acres of parkland per

1,000 residents. The City's Municipal Code, Chapter 3.40, establishes the requirements for dedication of land, payment of an in-lieu fee, or a combination of both for the purpose of providing parks and recreational facilities to serve future residents of a subdivision development.

The Project would result in an increase of 12,078 dwelling units compared to the previously approved original SP 218 and 2005 Aquabella SPA. In total, the Project is expected to house 43,050 residents. Accordingly, 129.15 acres of parkland would be required by the Project to meet the City's 3 acres per 1,000 resident standard.

The Project proposes the development of 80 acres of public parks on site, composed of 40 acres of lakes, a 15-acre lake promenade, and 25 acres of additional parks. The need for an additional 49.15 acres of park facilities would be met by the Project through payment of an in-lieu fee in compliance with General Plan PPS.1-2 and Municipal Code Sections 3.38 and 3.40. The In-lieu fees would be used by the City to maintain, improve, expand, or build new park facilities. Compliance with the City's parkland requirements would be required as a condition of Project subdivision approval. Through compliance with the City's parkland requirements, the Project is not likely to result in new significant or more severe impacts compared to the prior approvals and would not result in the significant or accelerated deterioration of existing park facilities. Refer also to Section 5.16, Recreation, for further discussion.

Therefore, with the provision of on-site park facilities, as well as the contribution of an appropriate in-lieu fee, impacts of the proposed Project related to new or physically altered park facilities would be similar to prior approvals and **less than significant**.

Other Public Facilities

As described above, the Project would result in an increase of 12,078 dwelling units compared to prior approvals. In total, the Project is expected to house 43,050 residents. The Project applicant would be required to pay applicable DIF in accordance with the City's requirements for each unit built. As described in Section 3.38.100 of the Municipal Code, fees will be used for library facilities and improvements. Moreno Valley currently has three branches. The Project does not propose a new library or the expansion of existing libraries. Payment of the DIF would address the need for additional library services. Impacts to library services would be similar to prior approvals and **less than significant**.

Related to public health services, while the Project would increase the number of residents on site, the site is adjoined by two major medical centers—the Riverside University Health System Medical Center and Kaiser Permanente Hospital and medical complex. The Project would not result in more severe or new substantial impacts that could result in the need for new or expanded public health facilities because these medical centers would adequately serve the Project resident and employee population. Impacts to would be similar to prior approvals and **less than significant**.

4.15.5 Significance of Impacts Before Mitigation

Threshold 1: Result in Substantial Adverse Impacts

Fire Protection Services

Implementation of the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities with the payment of the City's DIF. Impacts would be **less than significant.**

Police Services

Implementation of the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities with the payment of the City's DIF. Impacts would be **less than significant**.

Schools

Impacts associated with the development of up to 40 acres of schools on site are analyzed throughout this SEIR. Implementation of the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities with the payment of the DIF/school mitigation fees. Payment of mandatory school impact fees in accordance with SB 50 would fully mitigate potential impacts to school facilities Impacts would be **less than significant.**

Parks

With the provision of on-site park facilities, as well as the contribution of an appropriate in-lieu fee, impacts of the Project related to provision of new or physically altered park facilities would be **less than significant**.

Other Public Facilities

With payment of the applicable DIF that would contribute to improvements to or new library facilities, impacts to library facilities would be **less than significant.**

4.15.6 Mitigation Measures

4.15.6.1 Previously Adopted Mitigation Measures

The following mitigation measures were previously adopted to reduce prior project impacts as part of the 1999 EIR and the 2005 Addendum.

1999 EIR

Mitigation Measure 17: Development to provide funding for additional fire station and equipment. Fair share contribution to be a condition of Specific Plan approval or in development agreement with the City.

Mitigation Measure 18: Sites for two new elementary schools, a middle school, and a high school will be provided. Additional funding for schools will be provided under an existing Mello-Roos district and building fees.

2005 Addendum

Amendment to Mitigation Measure 17: Development to provide funding for an additional fire station, equipment, and addition of one engine crew at Station 91 at Lasalle and Iris. Fair share contribution to be a condition of Specific Plan approval or in development agreement with the City.

Summary

The conditions for fire protection services have changed in the City since the 2005 Addendum was approved. The previously approved mitigation measures are no longer applicable and are not carried through to this Subsequent EIR.

4.15.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

No mitigation is required.

4.15.7 Significance of Impacts after Mitigation

Threshold 1: Result in Substantial Adverse Impacts

Fire Protection Services

Impacts to the provision of fire protection services would be **less than significant**.

Police Services

Impacts to the provision of police services would be **less than significant.**

Schools

Impacts to schools would be **less than significant**.

Parks

Impacts to parks would be **less than significant**.

Other public facilities

Impacts related to other public facilities would be **less than significant**.

4.16 Recreation

This section describes the existing recreation conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the Project compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would not result in potentially significant recreation impacts (City of Moreno Valley 1999b, 2005b). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) did not discuss impacts to recreation.

4.16.1 Existing Environmental Conditions

The Project site currently consists of undeveloped land in the southern portion of the City of Moreno Valley (City), surrounded by predominantly residential and medical uses. Trails and sidewalks are provided along the arterial streets surrounding the Project site including along Nason Street, Cactus Avenue, Lasselle Street, Iris Avenue, and Oliver Street, except that trails/sidewalks are only provided along one side of the street in certain locations (e.g., Nason and Cactus) and are largely unimproved by landscaping where they border the site.

Surrounding Parks, Trails, and Recreational Facilities

Parks and recreational facilities within the City are maintained and operated by the Parks and Community Services Department and include 7 community parks, 24 neighborhood parks, 4 specialty parks, and 15 miles of trails/greenways. City recreational facilities include a golf course, sports fields, skate parks, an equestrian center, and a community center. In addition to the 482 acres of City parks, the Lake Perris State Recreation Area (approximately 1 mile from the Project site) and the Riverside County Box Springs Mountain Park (approximately 5.25 miles from the Project site) border the City to the south and north, respectively. The City of Moreno Valley General Plan 2040 (2040 General Plan) Parks and Public Services Element identifies the parkland deficiency within the City (City of Moreno Valley 2021a)[1];. Consistent with the Quimby Act (see Section 4.16.2, Regulatory Framework), the City has established a minimum park service standard of 3 acres of parkland per 1,000 residents. As of 2020, the population of Moreno Valley was 208,634 people (U.S. Census Bureau 2020), resulting in

[1] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (Sierra Club v. City of Moreno Valley, et al., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

approximately 2.6 acres of parkland per 1,000 residents. The City has found that it needs an additional 67.69 acres of land for five new park facilities in order to meet the City's established park service standard/ratio.

There are five neighborhood parks (Woodland Park, Parque Amistad, Vista Lomas Park, Celebration Park, and Fairway Park) located close to the Project site. As described in Table 4.15-3 in Section 4.15, Public Services, these parks include barbecues, basketball courts, pickleball courts, an athletic field, playgrounds, tennis courts, softball/baseball fields, a soccer field, a tot lot, a volleyball court, walking paths, and other amenities (City of Moreno Valley 2021a). In addition, the Vista del Lago High School, Landmark Middle School, and La Jolla Elementary School provide indoor and outdoor recreational facilities for area students, including a football field, baseball/softball fields, tennis courts, track and field facilities, basketball courts, blacktop courts, and playground facilities. The private Rancho del Sol Golf Club is located about 0.5 miles east of the Project site.

Approximately 0.5 miles south of the Project site is the 8,800-acre Lake Perris State Recreation Area, which provides a myriad of recreational activities, including hiking, bicycling, rock climbing, horseback riding, camping, picnicking, fishing, swimming, water sports, and boating. Improved trails are provided along the boundaries of and throughout the Lake Perris State Recreation Area. An improved trail is also provided on Cactus Avenue, commencing about 0.25 miles east of the site, which provides an easterly connection to the Lake Perris State Recreation Area and its upland hunting area.

4.16.2 Regulatory Framework

Federal

There are no federal regulations regarding recreation that would apply to the Project.

State

Quimby Act

California allows a city or county to pass an ordinance that requires, as a condition of approval of a subdivision, either the dedication of land, the payment of a fee in lieu of dedication, or a combination of both for park and recreational purposes if certain requirements are met (California Government Code Section 66477). One of these requirements is that the dedicated land or fees, or combination thereof, shall be used only for the purposes of developing or rehabilitating neighborhood or community park or recreational facilities to serve the subdivision for which the land was dedicated or fees were paid. This legislation, commonly called the Quimby Act, establishes a maximum parkland dedication standard of 3 acres of parkland per 1,000 residents for a new subdivision development unless the amount of existing neighborhood and community parkland exceeds that limit.

California Government Code, Section 66000.5 – Mitigation Fee Act

The Mitigation Fee Act complements the Quimby Act by allowing separate impact and recreation facilities fees to be collected so that parks can be improved and recreation facilities can be maintained. The act also allows impact fees to be placed on non-subdivision residential developments.

Local

City of Moreno Valley General Plan 2040

The 2040 General Plan contains objectives and policies to ensure adequate park and recreation facilities are provided to meet the needs of the City.

Parks and Public Services Element

The Parks and Public Services Element of the 2040 General Plan provides information, goals, policies, and needs to guide decision making and investment in public services within the City.

The Project site has been identified in the 2040 General Plan to include a potential location for a new "Central Park" that would include passive and active amenities and act as a signature facility located within the Downtown Center area (City of Moreno Valley 2021a). The following relevant goals and policies identified in the Parks and Public Services Element are also applicable to the Project (City of Moreno Valley 2021a):

Goal PPS-1: Provide and maintain a comprehensive system of quality parks, multi-use trails, and recreational facilities to meet the needs of Moreno Valley's current and future population.

Policy PPS.1-1: Increase the acreage of parks in Moreno Valley to serve the needs of the growing population and maintain a standard of three acres of parkland per 1,000 residents.

Policy PPS.1-2: Require that proponents of new development projects contribute to the acquisition and development of adequate parks and recreational facilities within the community, either through the dedication of park land and construction of facilities, or the payment of in-lieu fees.

Policy PPS.1-3: Locate new parks in the generalized locations shown on Map PPS-1 so that all residents have easy access to a park from their home. New parks should be located outside of the 65dbl noise contour (see Map N-3) and be accessible by transit.

Policy PPS.1-4: Design and construct parks, public spaces and recreational facilities for flexible use, energy efficiency, adaptability over time, and ease of maintenance.

Policy PPS.1-5: Use site design, landscaping, lighting, and traffic calming measures to create safe parks and open spaces

Policy PPS.1.6: Prioritize the maintenance and, where feasible, improvement of parks and recreational facilities to ensure safe, attractive facilities that are responsive to community needs.

Policy PPS.1-7: Provide on-going opportunities for public involvement and input into the park planning process, including priorities for amenities, facilities, programming, and improvements.

Policy PPS.1-9: Design and construct the multi-use trail network to connect parks, plazas, and open spaces within the community and promote access to these spaces.

Action PPS.1-A: Prioritize the creation of a Central Park facility in the Downtown Center large enough to serve as an amenity and a focal point for the whole community and a draw for visitors from the wider region.

Goal PPS-2: Locate, design, and program public facilities as contributors to neighborhood quality of life.

Policy PPS.2-1: Provide community centers, arts/cultural facilities, libraries, and other community oriented facilities and programming, ensuring they respond to the diverse interests, needs, ages, and cultural backgrounds of Moreno Valley residents at reasonable costs and are distributed equitably and conveniently throughout Moreno Valley.

Policy PPS.2-2: Encourage privately operated and community-based recreation opportunities, such as climbing gyms, fitness centers, yoga studios, dance schools and other hobby-oriented businesses.

Policy PPS.2-4: Collaborate with schools to facilitate the shared use of sports and recreational facilities through continued/expanded Joint Use Agreements or other vehicles.

Policy PPS.2-5: Partner with public and private entities to provide community services that support families and meet the diverse needs of community members of all ages, backgrounds, and interests.

Open Space and Resource Conservation Element

The Open Space and Resource Conservation Element of the City's 2040 General Plan includes the goals and policies related to protection and enhancement of open space and natural resources, preservation of cultural and scenic resources, promotion of water and energy efficiency, and promotion of waste reduction. The following relevant goals and policies are identified in the Open Space and Resource Conservation Element and are applicable to the Project (City of Moreno Valley 2021b):

Policy OSRC.1-3: Maximize public access to natural resource areas where appropriate, to enhance environmental awareness and provide recreational opportunities.

Policy OSRC.1-5: Design stormwater detention basins as multi-use amenities providing recreation, aesthetic value, and wildlife habitat along with flood control.

Policy OSRC.1-14: Coordinate with public and private entities to link regional open spaces with a network of paths and trails, including connections to Moreno Valley's Multi Use Trail System.

Policy OSRC.1-15: Expand the City's network of multi-use trails and provide connections from residential and commercial areas within the city to surrounding hillsides, ridgelines, open spaces and other scenic areas.

Policy OSRC.1-16: Provide sufficient resources for the maintenance of trails and staging areas through a combination of grant funding, city resources, and volunteer efforts.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

City of Moreno Valley Municipal Code

Chapter 3.38 Residential Development Impact Fees

Chapter 3.38 of the City's Code of Ordinances covers all impact fees imposed by the City as a condition of development approval to recover the new development's reasonable share of the cost of each type of public facility and infrastructure improvements. Fees provide funding for circulation improvements, public services, recreational services, public facilities, and credits for improvements provided by developers.

Chapter 3.40 Dedication of Land for Park Facilities and Payment of In-Lieu Fees

Chapter 3.40 of the City's Code of Ordinances covers the implementation of the provisions of the Quimby Act. This allows the City to require the dedication of land for park and recreational facilities or a payment of an in-lieu fee as a condition of project approval for projects involving a subdivision.

4.16.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to recreation are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G, a significant impact related to recreation would occur if the Project would:

1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
2. Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

4.16.4 Impact Analysis

4.16.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

Section 5.1 of the 1999 EIR, Public Facilities and Services, discusses the potential significant park impacts of the original SP 218. The original SP 218 proposed to develop 2,922 single-family units, resulting in an increase of approximately 9,800 residents. It proposed to provide 51.1 acres of dedicated parkland and a 148.7-acre golf course. The 1999 EIR determined that the original SP 218 would meet the park requirements that had been established in the then-current general plan. Impacts to recreational facilities resulting from the original SP 218 were determined to be less than significant (City of Moreno Valley 1999b).

Mitigation

No mitigation was identified.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR, prepared to expand upon limited environmental issue areas, did not include additional information or analysis related to recreation.

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Aquabella SPA amended the original SP 218 to replace the 2,922 single-family residential units with 2,702 age-restricted residential units and 220 market-rate units and to replace the 148.7-acre golf course with an approximately 40-acre lake complex. The 2005 Addendum for the 2005 Aquabella SPA did not identify any changes in impacts to parks and recreation and determined that impacts would remain less than significant (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was identified.

4.16.4.2 Project Impact Analysis

The Project is an amendment to the 2005 Aquabella SPA, which amended the original SP 218. This second amendment would introduce an additional 12,078 multifamily housing units to the Project site compared to the original SP 218 and 2005 Aquabella SPA, developing a total of 15,000 units on the Project site. The Project would expand the eastern boundary of the Project site to include an additional parcel. Additionally, the Project designates 40 acres for school use, with up to three elementary school sites and one middle school site, which is an increase from the 30.5 acres designated under the original SP 218 (not including the completed 50-acre high school) and 0 acres identified in the 2005 Aquabella SPA. Like the 2005 Aquabella SPA, the Project proposes to complete a 40-acre lake complex. Impacts to recreation facilities that would result from the Project changes are analyzed below.

Threshold 1: Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

As described above, the City's 2040 General Plan establishes an objective to provide a minimum of 3 acres of parkland per 1,000 residents in the City. The City's Municipal Code, Chapter 3.40, establishes the requirements for dedication of land, payment of an in-lieu fee, or a combination of both for the purpose of providing parks and recreational facilities to serve future residents of a subdivision development.

The City currently provides 540 acres of City parkland. As of 2020, the City does not meet the 3 acres of parkland per 1,000 resident goal, providing approximately 2.6 acres of parkland per 1,000 residents. As such, there is an existing demand for additional parkland in the City due to a lack of adequate facilities to support the population.

Disproportional use of existing park facilities beyond what they were planned for can result in overcrowding, which can in turn result in deterioration of a facility and require increased maintenance and replacement.

The Project would result in an increase of 12,078 dwelling units compared to the prior approvals. In total, the Project is expected to house 43,050 residents. Accordingly, 129.15 acres of parkland would be required by the Project to meet the City's 3 acres per 1,000 resident standard. The Project proposes to include 80 acres of public parks on site, composed of 40 acres of lakes, a 15-acre lake promenade, and 25 acres of additional parks. The need for an additional 49.15 acres of park facilities would be met by the Project through payment of an in-lieu fee in compliance with 2040 General Plan Policy PPS.1-2 and Municipal Code Sections 3.38 and 3.40. The in-lieu fees would be used by the City to maintain, improve, expand, or build new park facilities. Compliance with the City's parkland requirements would be required as a condition of Project subdivision approval. Through compliance with the City's parkland requirements, the Project is not likely to result in new significant or more severe impacts compared to the prior approvals and would not result in the significant or accelerated deterioration of existing park facilities.

In addition, there are several regional recreational facilities outside of the City's jurisdiction that are located in close proximity to the Project site and the City boundaries that would be used by residents of the City and Project. These include the 8,800-acre Lake Perris State Recreation Area (approximately 0.5 miles from the Project site), the 3,400–acre Box Springs Mountain Reserve Park (approximately 5.25 miles from the Project site), Norton Younglove Reserve (Approximately 4 miles from the Project site), and the 19,000-acre San Jacinto Wildlife Area (approximately 3 miles from the Project site) (RCRPOSD 2022; CDFW 2023; California State Parks 2023). These facilities are not included in the City's total acreage of park facilities. However, they provide numerous recreational opportunities for City residents and future Project site residents, which would reduce the demand on existing and future park facilities within the City limits.

Therefore, with the provision of on-site park facilities, as well as the contribution of an appropriate in-lieu fee, impacts of the Project related to the substantial deterioration of existing park facilities would be similar to prior approvals and **less than significant**.

Threshold 2: Would the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

The Project would include the construction and operation of parks and recreational facilities within the Project site. As described above, similar to prior approvals, the Project would include 80 acres of parks, comprising 40 acres of lakes, plus a 15-acre lake promenade, and 25 acres of additional parks, as well as recreational trails located along Project streets and through the Project site. As with the prior approvals, environmental impacts associated with construction of the Project's parks, recreational facilities, and trails have been addressed throughout this Subsequent EIR under the various resource topics including air quality, biological resources, cultural resources, greenhouse gas emissions, noise, and transportation. Mitigation has been provided, as appropriate, to reduce potential significant, short-term construction impacts and operational impacts associated with the proposed recreational facilities.

The applicant would also be required to comply with the City's land dedication and in-lieu park fee requirement for the provision of park or recreational facilities in the City. Construction or expansion of parks in the City could result in environmental impacts, such as conversion of habitat, water pollution during construction, or increased noise. However, the location, timing, and impact of construction or expansion of such facilities is unknown and not reasonably foreseeable at this time. Such park construction or expansion would be required to comply with the law, including CEQA, which would require separate environmental review, compliance with regulations, and the adoption

of mitigation to reduce any identified significant environmental effects. Therefore, impacts associated with the construction or expansion of recreational facilities would be **less than significant**.

4.16.5 Significance of Impacts Before Mitigation

Threshold 1: Deterioration of Facilities

Impacts related to recreation and parks would be **less than significant**.

Threshold 2: Adverse Effect on Environment

Impacts related to recreation and parks would be **less than significant**.

4.16.6 Mitigation Measures

4.16.6.1 Previously Adopted Mitigation Measures

1999 EIR

No mitigation was required.

2003 Supplemental EIR

This topic was not included in the 2003 Supplemental EIR.

2005 Addendum

No mitigation was required.

4.16.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

Impacts related to recreation and parks would be less than significant. No mitigation is required.

4.16.7 Significance of Impacts after Mitigation

Threshold 1: Deterioration of Facilities

Impacts related to recreation and parks would be **less than significant**.

Threshold 2: Adverse Effect on Environment

Impacts related to recreation and parks would be **less than significant**.

4.17 Transportation

This section identifies associated regulatory requirements; describes the existing traffic conditions within the proposed Aquabella Specific Plan Amendment Project (Project); evaluates potential significant impacts related to conflicts with an applicable program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities; evaluates conflicts or inconsistencies with California Environmental Quality Act (CEQA) Guidelines Section 15064.3(b); identifies any increase in hazards due to a geometric design feature or an incompatible use and inadequate emergency access; lists any applicable project design features (PDFs); and identifies mitigation measures related to implementation of the Project.

The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR) evaluated traffic/transportation impacts using a level of service (LOS) analysis. The 1999 EIR concluded that no significant traffic impacts would result from the original Moreno Valley Field Station Specific Plan 218 (original SP 218) with the improvements provided by the original SP 218 and future improvements identified for cumulative traffic effects (City of Moreno Valley 1999). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum) found impacts would be similar or reduced when compared to the original SP 218, and did not identify the need for any additional mitigation measures compared to the original SP 218 (City of Moreno Valley 2003, 2005). Section 4.17.6 includes a summary of these previous environmental analyses and mitigation measures identified to improve level of service at study area roadway segments and intersections.

The state's adoption of Senate Bill (SB) 743 and subsequent adoption of CEQA Guidelines section 15064.3 provide that traffic delay under an LOS metric is no longer considered a significant environmental impact under CEQA. State law now requires the use of a vehicle miles traveled (VMT) metric for land use development projects, which is intended to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, while promoting the development of multimodal transportation system, and providing clean, efficient access to destinations. However, as relates to subsequent CEQA review, the recent case of *Olen Properties Corp. v. City of Newport Beach* (2023) 93 Cal.App.5th 270, clarifies that agencies are not required to undertake a VMT study where an LOS study was previously prepared, but instead have discretion to provide an apples-to-apples comparison to the prior LOS analysis. This is because the change to the law and CEQA Guidelines is not considered "new information" triggering subsequent environmental review under California Public Resources Code section 21166.

This CEQA transportation impact analysis presents and uses the VMT metric to evaluate and disclose Project impacts in a manner consistent with current state law and policies. However, the City also required a summary of the Project's traffic analysis using the level of service (LOS) metric consistent with City General Plan requirements and for informational purposes. This LOS traffic analysis is provided as part of this SEIR in Appendix K3, which allows for a direct comparison to the prior LOS analyses.

The following documents were used in the preparation of this section of this subsequent EIR (SEIR):

- Aquabella Specific Plan Amendment Project Trip Generation Assessment, prepared by Fehr & Peers, August 16, 2023 (Appendix K1)
- Aquabella Specific Plan Amendment Project Transportation Impact Assessment, prepared by Fehr & Peers, December 13, 2023 (Appendix K2)
- Aquabella Specific Plan Amendment Project Traffic Analysis, Prepared by Urban Crossroads, November 10, 2023 (Appendix K3)

The transportation analysis, including the VMT analysis and traffic analysis, were prepared per requirements established by the City of Moreno Valley Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (City of Moreno Valley 2020), the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018), the Western Riverside Council of Governments (WRCOG) SB 743 Implementation Pathway Document Package (WRCOG 2019) and Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (WRCOG 2020), and the California Department of Transportation (Caltrans) Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance (Caltrans 2020a). The approved LOS analysis for the Project is included as Appendix K3.

Project Summary and Modeling Assumptions

Chapter 3, Project Description, of this SEIR, describes the various components comprising the Project. For purposes of this transportation analysis, this SEIR assumes buildout of the following relevant components:

- 15,000 multifamily dwelling units (DUs), assumed to be comprised of 7,500 multifamily low-rise residential dwelling units (DUs) and 7,500 multifamily mid-rise residential DUs
- 49,900 square feet of commercial
- 300-room hotel
- Three elementary schools (3,995 students)
- One middle school/junior high school (approximately 2,049 students)[1]
- 40 acres of active sports park, which would include:
  - 25 acres of Active Sports Park
  - 15 acres of park and lake promenade

[1] The Project provides for the development on site of up to three elementary schools and one middle school. However, as described in Section 4.15, Public Services, the school district (Moreno Valley Unified School District) currently estimates lower student generation and enrollment. Thus, these figures present a worst-case scenario. Actual transportation needs related to schools may be lower.

Figure 4.17-1A illustrates the focus study area and access points to the Planning Areas (PAs). Figures 4.17-1A, 4.17-1B, and 4.17-1C also illustrate the intersections included and analyzed in the Traffic Analysis (TA) prepared for the Project. Vehicle access to each PA is oriented primarily to connect with the adjacent City of Moreno Valley General Plan 2040 (2040 General Plan)[2]; roadways of Cactus Avenue, Nason Street, Lasselle Street, Iris Avenue, Oliver Street, and Brodiaea Street.

4.17.1 Existing Environmental Conditions

This section provides a summary of the existing circulation network, bicycle and pedestrian facilities, truck routes, and transit service. Figure 4.17-2 illustrates the 2040 General Plan circulation network. Figure 4.17-3 illustrates the existing and planned bicycle and pedestrian network and Figure 4.17-4 illustrates the transit lines and facilities.

Existing Circulation Network

Cactus Avenue is currently striped with four automobile travel lanes and two bike lanes. On the north side of Cactus Avenue, a sidewalk is provided from Lasselle Street to Nason Street. From Lasselle Street to Kitching Street, Cactus Avenue has four automobile travel lanes and two bike lanes, and sidewalks on both the north and south sides of the street. From Nason Street to Oliver Street, Cactus Avenue is striped with two automobile travel lanes but no sidewalks or bike lanes. A sidewalk is provided on the south side of Cactus Avenue from west of Cider Gum Way to Oliver Street. In addition, a second eastbound through lane is included just west of Oliver Street. From Oliver Street to Moreno Beach Drive, Cactus Avenue is currently striped with four automobile travel lanes and two bike lanes. Sidewalks are provided on the north and south sides of Cactus Avenue from Oliver Street to Moreno Beach Drive.

Brodiaea Avenue from Kitching Street to Lasselle Street consists of two lanes shared between automobile and bicycle traffic, with sharrows (shared-lane markings) painted on the road. Sidewalks and parking are also provided along Brodiaea Avenue from Kitching Street to Lasselle Street. A short section of Brodiaea Avenue along the Jan Peterson Child Development Center to Nason Street has two travel lanes and a sidewalk on the south side. From Oliver Street to west of Landon Road, Brodiaea Avenue is a two-lane road with a sidewalk on the south side. From west of Landon Road through the existing development, sidewalks are provided on the north and south sides of Brodiaea Avenue. However, east of the existing development from Oliver Street to Moreno Beach Drive, Brodiaea Avenue is a two-lane road with a sidewalk on only the south side.

Alessandro Boulevard is a three-lane (one westbound and two eastbound) roadway from Kitching Street to Chara Street. From Chara Street to Darwin Drive, Alessandro Boulevard is a two-lane road. Bus stops, served by

[2] The 2040 General Plan Update was effective immediately upon adoption in June 2021. An environmental group subsequently filed a lawsuit challenging its adoption. In May 2024, the Riverside County Superior Court ruled in the lawsuit, directing the City to set aside the 2040 General Plan Update, including related changes to the Zoning Ordinance, its Climate Action Plan (CAP), and certification of its EIR until errors identified in the EIR's analysis of air quality, greenhouse gas, and energy use impacts, and in its CAP, are rectified (Sierra Club v. City of Moreno Valley, et al., Riverside County Superior Court No. CVRI2103300).
In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

Route 20 and Route 41 are provided along Alessandro Boulevard. Alessandro Boulevard is a three-lane (two westbound and one eastbound) roadway from Darwin Drive to west of Blue Ribbon Lane. Alessandro Boulevard is a two-lane facility from west of Blue Ribbon Lane to Moreno Beach Drive without consistent bicycle or pedestrian accommodations.

Delphinium Avenue from Kitching Street to Lasselle Street consists of two lanes shared between automobile and bicycle traffic (sharrows are painted on the road). Sidewalks and parking are also provided along Delphinium Avenue from Kitching Street to Lasselle Street. From Nason Street to the east, Delphinium Avenue is a two-lane road with a sidewalk on the north side. There are existing speed bumps along Delphinium Avenue between Nason Street and Oliver Street.

John F Kennedy Drive is a four-lane road with bike lanes and sidewalks from Kitching Street to Lasselle Street. John F Kennedy is a two-lane road with a meandering sidewalk along the south side and terminates approximately 500 feet east of Laselle Street, which serves as an entrance to Vista del Lago High School. A gated emergency access road exists between John F Kennedy Drive's east terminus to Avenida Anilo. From Oliver Street to Moreno Beach Drive, John F Kennedy is a two-lane road with bicycle lanes and sidewalks and parking on both sides of the street.

Gentian Avenue is a two-lane road with a two-way-left-turn lane and bicycle lanes and sidewalks on both sides of the street from Kitching Street to Lasselle Street.

Iris Avenue from Kitching Street to Oliver Street currently is a six-lane road with bicycle lanes and sidewalks on both sides. Iris Avenue from Oliver Street to Kitching Street is served by RTA Route 20.

Lasselle Street Lasselle Street from Alessandro Boulevard to Copper Cove Lane is a four-lane road with a southbound separate bicycle lane whereas northbound bicycles are mixed with automobiles via sharrows. There is a sidewalk on the west side of Lasselle Street, but the east side does not currently have a sidewalk. From Copper Cove Lane to Brodiaea Avenue, Lasselle Street continues as a four-lane road with west-side sidewalk and includes separated bicycle lanes on both sides of the street. From Brodiaea Avenue to Cactus Avenue, four lanes are provided with separate bicycle lanes and sidewalks on both sides. The segment of Lasselle Street from Cactus Avenue to north of John F Kennedy Drive continues as a four-lane road with west side sidewalk and includes separated bicycle lanes on both sides of the street. From north of John F Kennedy Drive to Iris Avenue, four lanes are provided with separate bicycle lanes and sidewalks on both sides. Throughout the focus area, Lasselle Street is served by RTA Route 41.

Kitching Street from Alessandro Boulevard to Cactus Avenue is a four-lane road with east side sidewalk, but without explicit bicycle accommodations. From Cactus Avenue to John F Kennedy Drive, Kitching Street is a two-lane road with bicycle lanes on both sides and an east side sidewalk. Kitching Street from Gentian Avenue to Campanilla Way has two southbound and one northbound automobile lanes with bicycle lanes and an east side sidewalk. From Campanilla Way to Iris Avenue, Kitching Street continues as a four-lane road with east side sidewalk and includes separated bicycle lanes on both sides of the street.

Nason Street from Alessandro Boulevard to Cactus Avenue currently is a four-lane road with bicycle lanes and sidewalks on both sides. The stretch of Nason Street from Alessandro Boulevard to Cactus Avenue is served by RTA Route 20 and 41 and 31. From Cactus Avenue to Iris Avenue, Nason Street is a four-lane road with bicycle lanes and an east side sidewalk. Nason Street served by RTA Route 20 and 41 and 31.

Oliver Street from Alessandro Boulevard to Cactus Avenue is a two-lane road without designated bicycle or pedestrian accommodations. From Cactus Avenue to just north of John F Kennedy Drive, four lanes and a two-way-left-turn lane are provided and there are bicycle lanes and sidewalks on both sides. From just north of John F Kennedy Drive to Filaree Avenue, the east side of Oliver Street includes two automobile lanes with separate bicycle lane and sidewalk, whereas the west side of the street includes one automobile lane and a bicycle lane and no sidewalk. From Filaree Avenue to Iris Avenue, Oliver Street is a four-lane road with bicycle lanes and sidewalks on both sides.

Moreno Beach Drive from Alessandro Boulevard to Brodiaea Avenue is a two-lane road with bicycle lanes on both sides but no sidewalks. Moreno Beach Drive from Brodiaea Avenue to south of Cactus Avenue is currently a four-lane road (three southbound and one northbound) with a bicycle lane and a sidewalk on the west side. From south of Cactus Avenue to Oliver Street, Moreno Beach Drive is currently a six-lane road with bicycle lanes and sidewalks on both sides. Moreno Beach Drive from Alessandro Boulevard to Oliver Street is served by RTA Route 20.

Evergreen Street south of Delphinium Avenue is constructed as a two-lane road that connects to White Box Lane. It provides access to single-family homes along its east side and is not constructed with frontage improvements along its west side. There is paved sidewalk along the east side of Evergreen Street and there is no posted speed limit. There are parking restrictions along some parts of this roadway.

Morrison Street is a four-lane roadway with designated left-turn lanes or a two-way-left-turn lane from Alessandro Boulevard to Bay Avenue. From Bay Avenue to Cottonwood Avenue, four lanes are provided, but no median. Sidewalks exist on the east and west sides of Morrison Street. Morrison Street is classified as a Minor Arterial north of Alessandro Boulevard in the study area. From Alessandro Boulevard to Cactus Avenue, Morrison Street is classified as an Arterial.

Bicycle and Pedestrian Facilities

There are five bicycle facility classifications recognized by the City of Moreno Valley, which are defined as follows:

Class I Bikeways (Multi-Use Paths)

Class I bikeways are facilities that are physically separated from vehicles, designated for the exclusive use of bicyclists and pedestrians with minimal vehicle crossings. The minimum width for a Class 1 path is 10 feet, with at least two feet of clearance from obstructions on each side.

Class II Bikeways (Bicycle Lanes)

Class II bikeways are striped lanes designated for the use of bicycles on a street or highway. Vehicle parking and vehicle/pedestrian cross flow are permitted at designated locations. Class II bicycle facilities are striped lanes that provide bike travel and can be either located next to a curb or parking lane, a minimum width of five feet is recommended.

Class III Bikeways (Bike Routes)

Class III bikeways, also referred to as bike routes, are only identified by signs or pavement markings. A bicycle route is meant for use by bicyclists and for motor vehicle travel (i.e., shared use). Bicycle routes were typically selected where connectivity could be improved by filling gaps in the system, but there was not sufficient space to install bicycle lanes.

Class IV Bikeways (Cycle Tracks)

Class IV bikeways, also referred to as cycle tracks, are protected bike lanes, which provide a right-of-way designated exclusively for bicycle travel within a roadway that is protected from vehicular traffic with devices such as curbs, flexible posts, inflexible physical barriers, or on-street parking.

Bicycle Boulevards

Bicycle Boulevards are convenient, low-stress cycling environments on low traffic volume streets, typically parallel to higher traffic volume streets as an alternative to them. These roads prioritize bicyclists and typically include speed and traffic volume management measures, such as intersection ROW control, to discourage motor vehicle traffic.

Adjacent to the Project site, existing Class II bike lanes can be found along Cactus Avenue, Nason Street, Iris Avenue, and Lasselle Street between Cactus Avenue and La Barca Road, north of Iris Avenue.

The existing sidewalk network is mostly undeveloped adjacent to the Project site except where development has occurred under prior Project approvals (i.e., near the high school and apartments on western parts of the site). Opposite sides of the streets adjacent to the site (i.e., Cactus Avenue, Lasselle Street and Nason Street) tend to have continuous five-foot sidewalks that connect to the surrounding area.

Transit Service

There are existing bus and regional transit service options available to the City of Moreno Valley.

Riverside Transit Agency

RTA provides local and express services to Riverside County, which includes the City of Moreno Valley. The RTA routes that provide service near the Project site are Route 20 south of the Project site, Route 31 north of the Project site, and Route 41 west of the Project site. There are bus stops along Lasselle Street west of the Project site, along Iris Avenue south of the Project site, at the Riverside University Medical Center north of the Project site and along Alessandro Blvd a half mile north of the Project site.

Route 20 operates Monday to Friday between 4:00 AM and 11:00 PM & Saturday to Sunday between 7:00 AM and 9:00 PM with 1-hour headways. Route 20 provides service to Moreno Valley/March Field Metrolink Station and Moreno Valley College.

Route 31 operates Monday to Friday between 5:30 AM and 9:00 PM & Saturday to Sunday between 7:00 AM and 8:30 PM with 1-hour headways. Route 31 provides service to Moreno Valley Mall and Mt. San Jacinto College.

Route 41 operates Monday to Friday between 6:00 AM and 7:00 PM & Saturday to Sunday between 7:00 AM and 7:00 PM with 1-hour headways. Route 41 provides service to Mead Valley Community Center.

Metrolink

Commuter train service in the City of Moreno Valley is provided by Metrolink, which provides service throughout the Southern California region. The Moreno Valley/March Field Metrolink Station is located near the corner of Cactus Avenue and Meridian Parkway, approximately five miles west of the Project site. The Metrolink railroad runs north-south on the west side of the city, along the I-215 freeway.

Truck Routes

Figure 4.17-5 illustrates the truck routes in the City of Moreno Valley.

Vehicle Miles Traveled and Traffic Analysis Zone

CEQA Section 15064.3(a), Purpose, established vehicle miles traveled as the most appropriate measure of transportation impacts. Subdivision (a) defines vehicle miles traveled as "the amount and distance of automobile travel attributable to a project." The term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. For land use projects and plans, such as the Project, based on the predominant use, the following VMT efficiency metrics and method of estimation can be used:

- Total VMT per Service Population: The total VMT to and from all zones in the geographic area are divided by the total service population to get the efficiency metric of VMT per service population. The total service population is the sum of the number residents and the number of employees.
- Home-based VMT per capita: All home-based auto vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the population within the geographic area to get the efficiency metric of home-based VMT per capita (or per resident).
- Home-based Work VMT per employee: All auto vehicle trips between home and work are counted, and then divided by the number of employees within the geographic area to get the efficiency metric of home-based work VMT per employee.

The traffic analysis zone (TAZ) is the spatial unit (or geographical area) within which travel behavior and traffic generation are estimated in a travel demand model. Figure 4.17-6 depicts the Project's TAZ from the Riverside County's travel demand forecasting model (RIVCOM) that has been used in the VMT analysis of the Project. The RIVCOM model is a complex system that analyzes road networks, socio-economic data, driver behavior, and goods movement to predict where traffic flow will occur as the population grows and changes. While the RIVCOM model covers the entire Southern California Association of Governments (SCAG) region, Riverside County is the focus of analysis, and the model data is more disaggregated within the County as opposed to other areas of the region (WRCOG 2023). See Section 4.17.4, Methodology, for details of Project's VMT analysis.

Planned Circulation Network

The 2040 General Plan circulation network is illustrated on Figure 4.17-3. Within the Project's focus area defined in the TA, 2040 General Plan roadways are described individually below:

Cactus Avenue along the Project boundary is designated a Minor Arterial on the 2040 General Plan Circulation Network. For Cactus Avenue from Kitching Street to Nason Street, the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network shows existing Class II (Bike Lanes). From Nason Street to Moreno Beach Drive, proposed Class II (Bike Lanes) are shown. RTA transit service is shown on Cactus Avenue from Lasselle Street to Nason Street on the 2040 General Plan Transit Lines and Facilities.

Brodiaea Avenue from Kitching Street to Moreno Beach Drive is designated a Neighborhood Collector on the 2040 General Plan Circulation Network. The 2040 General Plan Existing and Planned Bicycle and Pedestrian Network shows proposed Class III bike routes for Brodiaea Avenue in the study area.

Alessandro Boulevard is designated as a Divided Major Arterial on the 2040 General Plan Circulation Network from Kitching Street to Nason Street. From Nason Street to Moreno Beach Drive, Alessandro Boulevard is designated as a four-lane Divided Major Arterial. Throughout the focused study area on Alessandro Boulevard, proposed Class II (Bike Lanes) are shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network. RTA transit service is shown on Alessandro Boulevard from Kitching Street to Moreno Beach Drive on the 2040 General Plan Transit Lines and Facilities.

Delphinium Avenue from Kitching Street to Lasselle Street is designated a Neighborhood Collector on the 2040 General Plan Circulation Network. A proposed Class IV (Bike Boulevard) is shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network.

John F Kennedy Drive from Kitching Street to Lasselle Street is shown as an Arterial on the 2040 General Plan Circulation Network. From Oliver Street to Moreno Beach Drive, John F Kennedy Drive is designated as a Minor Arterial on the 2040 General Plan Circulation Network. Existing Class II (Bike Lanes) are shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network. From Kitching Street to Lasselle Street and from Oliver Street to Moreno Beach Drive, existing Class II (Bike Lanes) are shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network. RTA transit service is shown on John F Kennedy Drive from Kitching Street to Lasselle Street on the 2040 General Plan Transit Lines and Facilities.

Gentian Avenue is designated as a Minor Arterial from Kitching Street to Lasselle Street on the 2040 General Plan Circulation Network. Proposed Class II (Bike Lanes) are shown on Gentian Avenue in the focused study area. RTA transit service is shown on Gentian Avenue from Kitching Street to Lasselle Street on the 2040 General Plan Transit Lines and Facilities.

Iris Avenue from Kitching Street to Moreno Beach Drive is shown as a Divided Major Arterial on the 2040 General Plan Circulation Network. Existing Class II (Bike Lanes) are shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network. Iris Avenue from Oliver Street to Kitching Street is shown as served by RTA on the 2040 General Plan Transit Lines and Facilities

Lasselle Street within the focus area is designated as an Arterial on the 2040 General Plan Circulation Network. Existing Class II (Bike Lanes) are shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network for Lasselle Street from Alessandro Boulevard to Gentian Avenue. From Gentian Avenue to Iris Avenue, planned Class II (Bike Lanes) are shown and have been recently installed along this segment of Lasselle Street. Throughout the focus area, Lasselle Street is shown as served by RTA on the 2040 General Plan Transit Lines and Facilities.

Kitching Street from Alessandro Boulevard to Iris Avenue is designated as a Minor Arterial on the 2040 General Plan Circulation Network. A Proposed Class I (Multi-Use Path) is shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network for Kitching Street from Alessandro Boulevard to Iris Avenue Kitching Street from Gentian Avenue to Iris Avenue is shown as served by RTA on the 2040 General Plan Transit Lines and Facilities.

Nason Street within the focus area is designated as a four-lane Divided Arterial on the 2040 General Plan Circulation Network. Existing Class II (Bike Lanes) are shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network for Nason Street in the focus area. The section of Nason Street from Alessandro Boulevard to Cactus Avenue is shown as served by RTA on the 2040 General Plan Transit Lines and Facilities.

Oliver Street within the focus area is designated as a Minor Arterial on the 2040 General Plan Circulation Network. From Cactus Avenue to Iris Avenue, planned Class II (Bike Lanes) are shown.

Moreno Beach Drive within the focus area is designated as a Divided Major Arterial on the 2040 General Plan Circulation Network. Existing Class II (Bike Lanes) are shown on the 2040 General Plan Existing and Planned Bicycle and Pedestrian Network for Moreno Beach Drive from Brodiaea Avenue to Oliver Street. North of Brodiaea Avenue, proposed Class II (Bike Lanes) are shown. Moreno Beach Drive from Alessandro Boulevard to Oliver Street is shown as served by RTA on the 2040 General Plan Transit Lines and Facilities.

Evergreen Street is not designated on the 2040 General Plan Circulation Network. As noted previously, it is a two-lane undivided roadway from Delphinium Avenue to White Box Lane, along the Project easterly boundary (PA-3). The east side of Evergreen Street has residential frontage and sidewalks, whereas the west side of Evergreen Street is currently vacant. As indicated in Section 6.1 of the Aquabella Specific Plan Amendment Project Traffic Analysis (Appendix K3), PA-3 access points have been evaluated at Oliver Street and Nason Street.

Darwin Drive is not designated on the 2040 General Plan Circulation Network. It is a two-lane road from Cottonwood Avenue to Alessandro Boulevard in the study area. North of Cottonwood Avenue along the same alignment, Burney Pass Drive continues to the north. For the segment of Darwin Drive along the Project frontage, the west side of Darwin Drive is vacant, whereas the east side of Darwin Drive is adjacent to residential land uses, with a sidewalk. Aquabella Specific Plan Amendment Project Traffic Analysis (Appendix K3) includes PA-1 Access 2 as the south leg of the intersection of Darwin Drive at Brodiaea Avenue.

4.17.2 Regulatory Framework

Federal

There are no federal regulations that would apply to the Project.

State

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the CEQA process for several categories of development projects, including the development of infill projects in transit priority areas, and to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (California Public Resources Code Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of LOS in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity, such as widening a roadway or the size of an intersection, which in turn may encourage more vehicular travel and greater pollutant emissions. Additionally, improvements to increase

vehicular capacity can often discourage alternative forms of transportation such as biking and walking. SB 743 directed the OPR to develop an alternative metric(s) for analyzing transportation impacts in CEQA document. The alternative shall promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of multimodal transportation system, and providing clean, efficient access to destinations. Under SB 743, it was anticipated that the focus of transportation analysis would shift from vehicle delay to VMT within transit-priority areas (i.e., areas well-served by transit).

Pursuant to SB 743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of VMT for analyzing transportation impacts. Additionally, OPR released Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA, to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their particular jurisdiction. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance … recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

In December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, that describes specific considerations for evaluating a project's transportation impacts using the VMT methodology. This new methodology is required to be used for projects beginning on July 1, 2020.

CEQA Guidelines Section 15064.3(b) sets forth criteria for analyzing transportation impacts and is divided into four subdivisions as follows:

1. **Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. **Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. **Qualitative Analysis.** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

The Project is a land use development, and therefore, Section 15064.3(b)(1) would apply, and transportation impacts have been assessed herein using the VMT metric.

Sustainable Communities Strategies: Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008), California Public Resources Code Section 21155.2, supports the state's climate action goals to reduce greenhouse gas emissions through coordinated transportation and land use planning, with the goal of more sustainable communities. Under the Sustainable Communities Act, the California Air Resources Board (CARB) sets regional targets for greenhouse gas emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the state's metropolitan planning organizations (MPOs). CARB will periodically review and update the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its greenhouse gas emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional greenhouse gas targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy to meet the targets. The alternative planning strategy is not a part of the RTP.

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the alternative planning strategy. Developers can get relief from certain CEQA requirements if their new residential and mixed-use Projects are consistent with a region's SCS (or alternative planning strategy) that meets the targets (see California Public Resources Code Sections 21155, 21155.1, 21155.2, 21159.28.).

Caltrans

Caltrans Transportation Impact Study Guide, May 20, 2020, provides that Caltrans' primary review focus is VMT, replacing LOS as the metric used in CEQA transportation analyses (Caltrans 2020b). Caltrans recommends use of OPR's recommended thresholds and guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018) for land use projects. In addition to VMT, the 2020 Transportation Impact Study Guide states that it may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the state highway system and connections with the state highway system.

AB 1358

Assembly Bill 1358, the Complete Streets Act (Government Code Sections 65040.2 and 65302), was signed into law by Governor Arnold Schwarzenegger in September 2008. As of January 1, 2011, the law requires cities and counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians and transit riders, as well as motorists.

At the same time, Caltrans, which administers transportation programming for the state, unveiled a revised version of Deputy Directive 64 (DD-64-R1 October 2008), an internal policy document that now explicitly embraces

complete streets as the policy covering all phases of state highway projects, from planning to construction to maintenance and repair.

AB 1317

AB 1317 (2023), California Civil Code Section 1947.1, requires the owner of "qualifying residential property," as defined, that provides parking with the property to unbundle parking from the price of rent in the Counties of Alameda, Fresno, Los Angeles, Riverside, Sacramento, San Bernardino, San Joaquin, Santa Clara, Shasta, and Ventura for buildings issued a certificate of occupancy after January 1, 2025. "Unbundled parking" is the practice of selling or leasing parking spaces separate from the lease of the residential use. The new law is intended to allow tenants in qualifying residential properties to purchase parking only when needed, increasing housing affordability while reducing traffic congestion, car dependency, and carbon emissions. The bill exempts certain properties, including residential properties with individual garages that are functionally a part of the property, housing developments that are 100% affordable housing, housing developments that receive low-income tax credits, and housing financed with tax-exempt bonds pursuant to a program administered by the California Housing Finance Agency.

Regional

Southern California Association of Governments

SCAG develops the RTP, which presents the transportation vision for Los Angeles, Orange, San Bernardino, Imperial, Riverside, and Ventura Counties. SB 375 was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing and environmental planning. Under the law, SCAG is tasked with developing an SCS, an element of the RTP that provides a plan for meeting emissions reduction targets set forth by the California Air Resources Board.

The RTP/SCS identifies priorities for transportation planning within the Southern California region, sets goals and policies, and identifies performance measures for transportation improvements to ensure that future Projects are consistent with other planning goals for the area (SCAG 2020). The Federal Transportation Improvement Plan, also prepared by SCAG based on the RTP, lists all of multimodal transportation projects proposed over a 6-year period. To qualify for CEQA streamlining benefits under SB 375, a project must be consistent with the RTP/SCS. On September 3, 2020, SCAG's Regional Council adopted Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), which replaced the RTP/SCS 2016.

Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians (SCAG 2020).

Riverside County Transportation Commission

Riverside County Transportation Commission (RCTC) advocates for state and federal policy and funding decisions that enable the Commission to implement Measure A, the RTP/SCS, and adopted plans and programs, comply with state and federal requirements, and Provide greater mobility, improved quality of life, operational excellence, and economic vitality in Riverside County (RCTC 2023).

Western Riverside Council of Governments

WRCOG is the regional planning agency for the western Riverside County. The main role of WRCOG is to facilitate, plan and identify funding opportunities for critical infrastructure projects and programs that benefit its member agencies and the communities they serve. It is a joint powers authority comprised of 18 incorporated cities, unincorporated Riverside County, two Municipal Water Districts and Riverside County Superintendent of Schools The City of Moreno Valley is one of the incorporated cities included as a member agency.

To assist member agencies with complying with SB 743 mandates, the WRCOG conducted an implementation study that developed localized guidelines, thresholds, and mitigation measures related to SB 743 to assist jurisdictions. SB 743 mandates that lead agencies will need to determine appropriate VMT methodologies, thresholds, and feasible mitigation measures to implement SB 743. WRCOG worked with member agencies and undertook the SB 743 Implementation Study to assist with implementation questions about the methodology, thresholds, and mitigation approaches for VMT impact analysis in its member agencies. A VMT impact screening tool was developed as part of the implementation study. The purpose of this web map is to serve as a screening tool for potential VMT impacts associated with select land use projects in the WRCOG planning area in compliance with the SB 743 changes to the CEQA statute and its associated CEQA Guidelines. WRCOG Transportation and Planning Department administers and distributes RIVCOM which has been used in the Project's VMT analysis.

WRCOG prepares updates to the Transportation Uniform Mitigation Fee (TUMF) Program Nexus Study and other documents related to the TUMF Program. This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a regional mitigation fee program, and it is imposed and implemented in every jurisdiction in Western Riverside County.

Riverside Transit Agency

The Riverside Transit Agency (RTA) is the Consolidated Transportation Service Agency for western Riverside County and is responsible for coordinating transit services throughout the approximate 2,500 square mile service area, providing driver training, assistance with grant applications and development of Short-Range Transit Plans. RTA provides both local and regional services throughout the region with 32 local routes, three CommuterLink express routes, on-demand GoMicro microtransit service and Dial-A-Ride services using 277 vehicles (RTA 2023). The City of Moreno Valley is one of its member jurisdictions and other cities include Banning, Beaumont, Calimesa, Canyon Lake, Corona, Eastvale, Hemet, Jurupa Valley, Lake Elsinore, Menifee, Murrieta, Norco, Perris, Riverside, San Jacinto, Temecula, Wildomar and part of the unincorporated areas of Riverside County.

Local

City of Moreno Valley General Plan 2040

The 2040 General Plan Circulation Element identifies goals, objectives, policies, and programs that will help the City maintain and enhance a complete transportation network, including automobile travel, transit, non-motorized transportation, and goods movement (City of Moreno Valley 2021a). The following Moreno General Plan Circulation Element policies are relevant to the Project.

Goal C-1: Strengthen connections to the regional transportation network.

C.1-1: Support regional infrastructure investments for all modes to relieve congestion and support healthy communities in the City of Moreno Valley.

C1-2: Maintain ongoing relationships with all agencies that play a role in the development of the City's transportation system.

C1-3: Cooperatively participate with SCAG, RCTC, WRCOG, and the TUMF Central Zone Committee to facilitate the expeditious construction of TUMF Network projects, and planning for a transportation system that anticipates regional needs for the safe and efficient movement of goods and people, especially projects that directly benefit Moreno Valley.

Goal C-2: Plan, design, construct, and maintain a local transportation network that provides safe and efficient access throughout the city and optimizes travel by all modes.

C.2-1: Design, plan, maintain, and operate streets using complete streets principles for all types of transportation projects including design, planning, construction, maintenance, and operations of new and existing streets and facilities. Encourage street connectivity that aims to create a comprehensive, integrated, connected network for all modes.

C.2-3: Work to eliminate traffic-related fatalities and severe injury collisions by developing a transportation system that prioritizes human life on the roadway network.

C.2-7: Plan access and circulation of each development project to accommodate vehicles (including emergency vehicles and trash trucks), pedestrians, and bicycles.

C.2-9: Require connectivity and accessibility to a mix of land uses that meets residents' daily needs within walking distance. Typically, this means creating walkable neighborhoods with block lengths between 330 feet and 660 feet in length, based on divisions of the square mile grid on which the city is laid out.

C.2-10: Ensure that complete streets applications integrate the neighborhood and community identity into the street design and retrofits. This can include special provisions for pedestrians and bicycles that complement the context of each community.

Goal C-3: Manage the City's transportation system to minimize congestion, improve flow and improve air quality.

C.3-1: Strive to maintain LOS "C" on roadway links wherever possible, and LOS "D" in the vicinity of SR-60 and high employment center. Strive to maintain LOS "D" at intersections during peak hours.

C.3-2: Allow for a list of locations to be exempt from the LOS policy based on right-of-way constraints and goals and values of the community. The City Engineer shall update the exempted intersection and roadway segments list periodically to be included with the traffic impact study guidelines and adopted by ordinance.

C.3-3: Where new developments would increase traffic flows beyond the LOS C (or LOS D, where applicable), require appropriate and feasible improvement measures as a condition of approval. Such measures may include extra right-of-way and improvements to accommodate additional left-turn and right-turn lanes at intersections, or other improvements.

C.3-4: Require development projects to complete traffic impact studies that conduct vehicle miles traveled analysis and level of service assessment as appropriate per traffic impact study guidelines

C.3-6: Require new developments to participate in Transportation Uniform Mitigation Fee Program (TUMF), the Development Impact Fee Program (DIF) and any other applicable transportation fee programs and benefit assessment districts

C.3-7: Support regional efforts for the development of a VMT mitigation impact fee.

C.3-8: Ensure that new development pays a fair share of costs to provide local and regional transportation improvements and to mitigate cumulative traffic deficiencies and impacts.

Goal C4: Manage the City's transportation system to minimize congestion, improve flow and improve air quality.

C.4-1: Support the development of highspeed transit linkages or express routes connecting major destinations within the city and beyond, including the Metrolink Station, that would benefit the residents and employers in Moreno Valley.

C.4-2: Collaborate with major employers and other stakeholders to improve access and connectivity to key destination such as the Downtown Center, the Moreno Valley Mall, the hospital complexes, Moreno Valley College, and the Lake Perris State Recreation Area.

C.4-3: Support the establishment of a Transit Center/Mobility Hub in the Downtown Center.

C.4-4: All new developments shall provide sidewalks in conformance with the City's streets cross-section standards, and applicable policies for designated urban and rural areas.

C.4-5: Recognize that high-speed streets, high-volume streets and truck routes can increase pedestrian and bicycle stress levels and decrease comfortability. Provide increased buffers and protected bicycle lanes in high-stress areas, where feasible. Provide landscaped buffers where feasible to separate pedestrian environments from the travel way adjacent to motor vehicles. Provide convenient and high-visibility crossings for pedestrians.

Goal C-5: Enhance the range of transportation in Moreno Valley and reduce vehicle miles traveled (VMT)

C.5-1: Work to reduce VMT through land use planning, enhanced transit access, localized attractions, and access to nonautomotive modes.

C.5-2: Encourage public transportation that addresses the particular needs of transit dependent individuals, including senior citizens, the disabled, and low -income residents.

C.5-3: Encourage bicycling as an alternative to single occupant vehicle travel for the purpose of reducing fuel consumption, traffic congestion, and air pollution.

C.5-4: Particularly in corridors and centers, work with transit service providers to provide first-rate amenities to support pedestrian, bicycle and transit usage, such as bus shelters and benches, bike racks on buses, high-visibility crossings, and modern bike storage.

C.5-5: Encourage local employers to implement TDM strategies, including shared ride programs, parking cash out, transit benefits, allowing telecommuting and alternative work schedules.

4.17.3 Significance Criteria

The significance criteria used to evaluate Project impacts to transportation are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to transportation would occur if the Project would:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
2. Conflict or be inconsistent with the CEQA Guidelines Section 15064.3, subdivision (b).
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.

Circulation System, Bicycle and Pedestrian Network, and Transit System

The programs, plans, ordinances, and policies listed in Section 4.17.2 are analyzed for their applicability to the Project under Threshold 1.

VMT

The following are the Moreno Valley thresholds of significance for use as part of the environmental review process under CEQA:

1. A project would have a significant VMT impact if, in the Existing Plus Project scenario, its net VMT per capita (for residential projects) or per employee (for office and industrial projects) exceeds the per capita VMT for Moreno Valley. For all other uses, a net increase in VMT would be considered a significant impact.
2. If a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant subject to consideration of other substantial evidence. If it is not consistent with the RTP/SCS, a project would have a significant VMT impact if:
   a. For residential projects its net VMT per capita exceeds the average VMT per capita for Moreno Valley in the RTP/SCS horizon-year.
   b. For office and industrial projects its net VMT per employee exceeds the average VMT per employee for Moreno Valley in the RTP/SCS horizon year
   c. For all other land development project types, a net increase in VMT in the RTP/SCS horizon-year would be considered a significant impact.

Note that the Cumulative No Project scenario shall reflect the adopted RTP/SCS; as such, if a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant subject to consideration of other substantial evidence.

The City's thresholds of significance are specific to Project-generated VMT and do not address the analysis of potential project effects on VMT. To evaluate the significance of the Project's potential effect on VMT, the following thresholds were applied to determine potential transportation impacts:

1. A project would have a significant VMT impact if the Existing Plus Project scenario VMT per service population within the Citywide or ten-mile radius exceeds the VMT per service population in the Existing No Project scenario within the same boundary.
2. A project would have a significant VMT impact if the RTP/SCS Horizon Year Plus Project scenario VMT per service population within the Citywide or ten-mile radius exceeds the VMT per service population in the Horizon Year No Project scenario within the same boundary.

Hazardous Features due to Design Features

Caltrans' Traffic Safety Bulletin 20-02-R1: Interim Local Development Intergovernmental Review Safety Review Practitioners Guidance, December 2020, applies to proposed land use projects and plans affecting the state highway system (Caltrans 2020a). The intent of the Interim Safety Review is to provide an outline for when queuing should be reviewed for traffic safety impacts. A review does not necessitate the need for traffic safety mitigation but evaluates whether a significant safety impact based on speed differential would occur, and then the significance of that traffic safety impact by the project must be determined on a case-by-case basis.

Per Appendix A, Freeway Queuing Analysis (based on City of Los Angeles Interim Guidance for freeway Safety Analysis), included in the Caltrans guide, if the Project adds two or more car lengths to the ramp queue in the peak hour that will extend into the freeway mainline, then the location must be reviewed for traffic safety impacts, which include a review for speed differential between the off-ramp queue and the mainline of the freeway during the same peak hour.

The Interim Safety Review Guidance realizes the fluid nature of freeway exit ramp queuing, and the difficulty in developing a nexus to any one project. Therefore, no methodology for fair share mitigation, as it relates to freeway exit ramp queuing is provided in the current guidelines.

This section includes a quantitative analysis of Caltrans off-ramps included in the Project's traffic study area related to queuing, as well as a qualitative analysis of other potential hazards (e.g., sight distance, road alignment, access) related to design features.

Emergency Access

The emergency access analysis evaluates whether the Project would comply with City's emergency access and/or evacuation requirements, including those imposed by the Fire Department.

4.17.4 Methodology

In December 2018, the CEQA Guidelines were updated to include a threshold for evaluating traffic impacts using a VMT methodology. This new methodology was required to be used statewide beginning on July 1, 2020. This section summarizes the methodologies used to perform the VMT analysis. The methodologies described are consistent with OPR and WRCOG guidelines and City of Moreno Valley Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (TIA Guidelines) (City of Moreno Valley 2020).

Project Trip Generation

As a first step in the Project's transportation analysis, Fehr & Peers conducted a trip generation assessment for the Project. The report is included as Appendix K1. The report includes the methodology used to estimate the Project trips and is inclusive of the trip reductions associated with internalization and Project features (or Project Design Features) that would further reduce Project trip generation. As described in this section, the Project's trip generation was used in the Project's CEQA and non-CEQA transportation analysis.

Trip Generation and Internal Capture

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Project trip generation was estimated for the daily condition and for a peak one-hour period during the morning and evening commutes when traffic volumes on the adjacent streets are typically the highest. Trip rates from the Institute of Transportation Engineers Trip Generation Manual, 11th Edition (ITE 2021), and the San Diego Association of Governments' (Not So) Brief Guide of Vehicular Traffic Generation Rates for San Diego Region (SANDAG 2002) were used to estimate the Project's trip generation.

Table 4.17-1 provides the Project's total trip generation. As shown in the table, the Project is anticipated to generate a total of 105,000 trips per day with 10,360 AM peak hour trips and 8,310 PM peak hour trips upon full buildout.

Table 4.17-1. Total Trip Generation

Land Use	ITE Code	Quantity	Units	Daily Trips	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Multifamily Housing (Low Rise)	220	7,500	DUs	50,550	720	2,280	3,000	2,410	1,415	3,825
Multifamily Housing (Mid-Rise)	221	7,500	DUs	34,050	638	2,137	2,775	1,784	1,141	2,925
Residential Trips Subtotal				*84,600*	*1,358*	*4,417*	*5,775*	*4,194*	*2,556*	*6,750*
Shopping Center (40-150 KSF)	821	49.9	KSF	3,369	53	33	86	127	132	259
Hotel	310	300	Rooms	2,397	77	61	138	90	87	177
Elementary School	520	3,995	Students	9,069	1,596	1,360	2,956	294	345	639
Middle School/ Junior High School	522	2,049	Students	4,303	741	632	1,373	147	160	307
Park and Lake Promenade	411	15	AC	12	0	0	0	1	1	2
Active Sports Park	SANDAG Trip Rate	25	AC	1,250	16	16	32	88	88	176
Non-Residential Trips Subtotal				*20,400*	*2,483*	*2,102*	*4,585*	*747*	*813*	*1,560*
Total Trip Generation				**105,000**	**3,841**	**6,519**	**10,360**	**4,941**	**3,369**	**8,310**

Source: Appendix K1.

Given the mixed-use nature of the Project, it will not generate traffic in a similar manner to what is typically evaluated for single-use projects. As such, the trip generation analysis evaluates the combined effects of the Project's mix of uses, regional location, demographics, and development scale that contribute to a reduction in off-site average weekday vehicle trips, which is known as internalization, and which accounts for trips beginning and ending on the Project site. Appendix K1 includes the details of The Environmental Protection Agency's (EPA's) MXD (mixed-used development) methodology that was used to determine the projected trip internalization for the Project.

Table 4.17-2 provides the Project's trip generation accounting for the internalization anticipated to result from the Project's mix of uses, regional location, demographics, and development scale. As shown in the table, the Project would generate a total of 82,425 trips per day with 6,806 AM peak hour trips and 6,598 PM peak hour trips.

Table 4.17-2. Trip Generation with Internalization Reductions

Trips	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Total Project Trips	105,000	3,839	6,517	10,356	4,941	3,369	8,310
Internalization Reduction (%)	21.5%	34.3%			20.6%		
Total Internalization Trips	(22,575)	(1,777)	(1,777)	(3,554)	(856)	(856)	(1,712)
Net External Trip Generation	**82,425**	**2,062**	**4,742**	**6,806**	**4,085**	**2,513**	**6,598**

Source: Appendix K1.

Travel Demand Management Reductions

The Project proposes to implement Travel Demand Management (TDM) measures that will reduce the number of vehicle trips generated by the Project. Trip generation reductions were applied to Project trip generation estimates using the percent VMT reductions associated with each measure. VMT reductions were calculated using Fehr & Peers' TDM+ tool, which applies California Air Pollution Control Officers Association (CAPCOA) methodology (CAPCOA 2021) for all proposed TDM measures. However, while the Project proposes a Mobility Hub concept, because that concept is not specifically documented in CAPCOA, as a conservative approach additional reductions were not applied for this measure. Nonetheless, the proposed Mobility Hub is expected to enhance and support the effectiveness of the other measures.

The TDM measures and associated VMT reductions are described below. They are grouped into the following three categories:

- Residential Trip Reductions – TDM measures that reduce trips generated by Project residential land uses.
- Employee Commute Trip Reductions – TDM measures that reduce Project employee trips generated by non-residential land uses.
- Project-generated Trip Reductions – TDM measures that are available to the Project as well as adjacent communities.

Project Design Features

To achieve the trip and VMT reductions described in this section, the Project would include the following PDFs. A detailed description of each PDF and its applicability to the Project is provided below.

Residential Trip Reduction Measures

PDF-TRANS-1: Community-Based Travel Planning: The Project's residential uses shall implement community-based travel planning (CBTP). CBTP is a residential-based approach to outreach that provides households with customized information, incentives, and support to encourage the use of transportation alternatives in place of single occupancy vehicles, thereby reducing household vehicle miles traveled and associated greenhouse gas emissions. Implementation of this feature in the Project shall consist of teams of trained travel advisors visiting all households within the Project upon move-in and having tailored conversations about residents' travel needs and educating residents about the various transportation options available to them.

PDF-TRANS-2: Unbundle Residential Parking Costs from Property Costs. The Project applicant or designee shall unbundle, or separate, a resident's parking costs from property costs, requiring those who wish to purchase parking spaces to do so at an additional cost. On the assumption that parking costs are passed through to the vehicle owners/drivers utilizing the parking spaces, this feature results in decreased vehicle ownership and, therefore, a reduction in vehicle miles traveled and greenhouse gas emissions. Parking costs must be passed through to the vehicle owners/drivers utilizing the parking spaces for this feature to result in decreased vehicle ownership. Implementation of this feature in the Project shall consist of parking spaces costing approximately $100–$150 as a separate monthly cost from the rental of a unit. (This required feature is consistent with Appendix D, Table 3, of the 2022 CARB Scoping Plan Update, which recommends that "multifamily residential development … [require] parking costs to be unbundled from costs to rent or own a residential unit.")

Employee Commute Trip Reduction Measures

PDF-TRANS-3: Commute Trip Reduction (CTR) Program Marketing. The Project applicant or designee shall implement a marketing strategy to promote the Project site employer's CTR program. Information sharing and marketing shall promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking, thereby reducing vehicle miles traveled and greenhouse gas emissions.

Implementation of this feature shall consist of the following performance criteria:

- On-site or online commuter information services
- Employee transportation coordinators
- On-site or online transit pass sales
- Guaranteed ride home service

PDF-TRANS-4: Rideshare Program: The Project applicant or designee shall implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Ridesharing encourages carpooled vehicle trips in place of single-occupied vehicle trips, thereby reducing the number of trips, vehicle miles traveled, and greenhouse gas emissions.

Implementation of this feature in the Project shall consist of promoting the following required performance criteria:

- Designating a certain percentage of desirable parking spaces for ridesharing vehicles
- Designating adequate passenger loading and unloading and waiting areas for ridesharing vehicles
- Providing an app or website for coordinating rides

PDF-TRANS-5: End-of-Trip Bicycle Facilities: The Project applicant or designee shall install and maintain end-of-trip bicycle facilities. Per CAPCOA's 2021 GHG Handbook, end-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing vehicle miles traveled and greenhouse gas emissions.

Implementation of this required feature will be sized to encourage bicycling by providing facilities to accommodate 10%–20% of the forecasted 804 employees staffed daily on the Project site. Implementation of this feature shall also be regularly maintained by the Project applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4.

PDF-TRANS-6: Discounted Transit Program for Work Trips. The Project applicant or designee shall provide subsidized, discounted, or free transit passes for employees through the permanent transportation management association referenced in PDF-TRANS-4. Per CAPCOA's 2021 GHG Handbook, reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced vehicle miles traveled and thus a reduction in greenhouse gas emissions. The Project design shall ensure accessibility either within 1 mile of high-quality transit service (rail or bus with headways of less than 15 minutes), 0.5 miles of local or less frequent transit service, or along a designated shuttle route providing last-mile connections to rail service. With the availability of bikeshare service, the Project site may be located up to 2 miles from a high-quality transit service.

Implementation of this feature in the Project shall be provided by the Project applicant or designee through the permanent transportation management association referenced in PDF-TRANS-4. Transit service shall be expanded with implementation of the Project to the following:

- Bus Rapid Transit is proposed on Alessandro Boulevard that would provide high-quality transit service within 0.5 miles of the Project.
- Bus service will provide direct connections to the Moreno Valley/March Field Metrolink Train Station located approximately 5 miles west of the Project.

- Bikeshare will be available to support the discounted transit program, including a non-electric bike share program with a minimum of 150 bikes and an electric bike share program with a minimum of an additional 150 bikes.

Project-Generated Trip Reduction Measures

On-site micro-mobility and connections to adjacent uses, such as schools and medical centers would be implemented with the following:

PDF-TRANS-7: Non-Electric Bikeshare Program. The Project applicant or designee shall establish a non-electric bikeshare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. The bikeshare program shall provide users with on-demand access to non-electric bikes for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to bicycles, displacing vehicle miles traveled and thus reducing greenhouse gas emissions. This program shall provide 25 electric bikes at certificate of occupancy of each 2,500th unit, and a minimum of 150 such bikes located within 0.5 miles of the Project's mobility hub to be maintained by the Project applicant or designee.

PDF-TRANS-8: Electric Scootershare Program. The Project applicant or designee shall establish the scootershare program within the Project area through the permanent transportation management association referenced in PDF-TRANS-4. Scootershare programs provide users with on-demand access to electric scooters for short-term rental purposes. Per CAPCOA's 2021 GHG Handbook, this encourages a mode shift from vehicles to scooters, displacing vehicle miles traveled and thus reducing greenhouse gas emissions.

PDF-TRANS-9 through PDF-TRANS-12 described below will facilitate transit network, service frequency and facilities and thereby, reduce Project generated VMT.

PDF-TRANS-9: Extend Transit Network Coverage. The Project applicant or designee shall coordinate with the Riverside Transit Agency to update bus service routes and service times to serve the new community through the permanent transportation management association referenced in PDF-TRANS-4. This would extend transit network coverage to existing and future employment centers, such as the World Logistics Center. Additionally, this would include extending transit hours for all shift times, such as the midnight shift change at the World Logistics Center. Per CAPCOA's 2021 GHG Handbook, this feature includes expansion of the local transit network by either adding or modifying existing transit service or extending the operation hours to enhance the service near the Project site. Starting services earlier in the morning and/or extending services to late-night hours can accommodate the commuting times of alternative-shift workers. This encourages the use of transit and therefore reduces vehicle miles traveled and associated greenhouse gas emissions.

PDF-TRANS-10: Increase Transit Service Frequency. The Project applicant or designee shall coordinate with the Riverside Transit Agency (RTA) to update bus service routes and service times to serve the new community. This will include working with RTA to establish Bus Rapid Transit on Alessandro Boulevard and providing direct bus connections to the Moreno Valley/March Field Metrolink Train Station. Per CAPCOA's 2021 GHG Handbook, increased transit

frequency reduces waiting and overall travel times, which improves the user experience and increases the attractiveness of transit service. This results in a mode shift from single occupancy vehicles to transit, which reduces vehicle miles traveled and associated greenhouse gas emissions.

PDF-TRANS-11: Implement Bus Rapid Transit (BRT). The Project applicant or designee shall support the City of Moreno Valley and the Riverside Transit Agency plans for BRT along Alessandro Boulevard. Implementation of this feature would include improved travel times from transit signal prioritization, increased service frequency, and a full-featured BRT service operating on a fully segregated running way with a specialized vehicles, attractive stations, and efficient fare collection practices.

Per CAPCOA's 2021 GHG Handbook, this feature will convert an existing bus route to a BRT system. BRT includes the following additional components, compared to traditional bus service: exclusive right-of-way (e.g., busways, queue jumping lanes) at congested intersections, increased limited-stop service (e.g., express service), intelligent transportation technology (e.g., transit signal priority, automatic vehicle location systems), advanced technology vehicles (e.g., articulated buses, low-floor buses), enhanced station design, efficient fare-payment smart cards or smartphone apps, branding of the system, and use of vehicle guidance systems. BRT can increase the transit mode share in a community due to improved travel times, service frequencies, and the unique components of the BRT system. This mode shift reduces vehicle miles traveled and the associated greenhouse gas emissions.

PDF-TRANS-12: Mobility Hub. The Project applicant or designee shall develop a state-of-the-art Mobility Hub at or near the Project site to bolster the effectiveness of active transportation options (mobility hubs are places of connectivity that bring together multiple modes of travel and strengthen first-mile/last-mile connections to transit). Mobility hubs provide a centralized location for non-automotive transportation modes to connect users to their destinations. There are limited benefits to implementing a stand-alone mobility hub, as the facility is meant to promote and support alternative transportation modes. Mobility hubs should be supplemented with additional strategies or programs that provide increased public transit, bicycle, and pedestrian access and improvements. Implementation of the Mobility Hub shall require coordination with the Riverside Transit Agency, Metrolink, and the City of Moreno Valley. Though the proposed Mobility Hub is not included in CAPCOA's 2021 GHG Handbook, many of the characteristics of the Mobility Hub (increased transit accessibility, increased bicycling accessibility) are part of other transportation demand management (TDM) strategies outlined in CAPCOA. The Mobility Hub is anticipated to strengthen the effectiveness of other proposed TDM strategies. However, to provide a conservative approach to trip generation, additional reductions were not applied for the Mobility Hub in the vehicle miles traveled reduction calculated for the Project.

The CAPCOA 2021 handbook provides a range of reduction potential for each measure based on trends and data observed in research and case studies. Environmental factors, such as place type and the intensity of application of the measure, determine how effective each measure will be for a project. Table 4.17-3 summarizes each of the proposed TDM measures, the maximum reduction potential and Project reduction that has been used in the trip generation analysis. While the Project is designed with densities and block lengths like an urban area, the transportation assessment recognizes that the Project is in a suburban setting and therefore, applies a

conservatively low range of reductions. A detailed description and VMT reduction calculation of applicable TDM Measures is provided in Appendix K1.

Table 4.17-3. Project TDM Measures

TDM Measure	Max Reduction Potential	Project Reduction
Residential Trip Reductions		
Community-Based Travel Planning	2.30%	1.50%
Unbundle Residential Parking Costs from Property Costs	15.70%	5.20%
	Residential Reduction	**6.62%**
Employee Commute Trip Reductions		
Commute Trip Reduction (CTR) Program Marketing	4.00%	2.00%
Rideshare Program	8.00%	1.25%
End-of-Trip Bicycle Facilities	4.40%	0.30%
Discounted Transit Program for Work Trips Only	5.50%	0.04%
	Employee Commute Reduction	**3.55%**
Project-Generated Trip Reductions		
Non-Electric Bikeshare Program	0.02%	0.01%
Scootershare Program	0.07%	0.01%
Extend Transit Network - Coverage and/or Hours for All Shift Times	4.60%	1.01%
Increase Transit Service Frequency	11.30%	0.25%
Bus Rapid Transit (BRT)	13.80%	0.16%
	Project-Generated Reduction	**1.44%**

Source: Appendix K1.

Since these TDM measures reduce overall Project trips, this group's total percent VMT reduction was applied after taking the reductions associated with the other measures, ensuring this group's effect on the Project are not overestimated. Table 4.17-4 provides the Project-generated trip reductions estimated by applying the TDM measures reduction to net-external trip generation (Table 4.17-3).

Table 4.17-4. Project-Generated Trip Reductions

TDM Measure	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Net External Trip Generation	82,425	2,064	4,742	6,806	4,085	2,513	6,598
Residential Trip TDM Reductions	(4,853)	(62)	(203)	(265)	(242)	(148)	(390)
Employee Commute Trip TDM Reductions	(42)	(7)	(3)	(10)	(1)	(3)	(4)
Trip Generation with Internalization, Residential and Employee Commute TDM Reductions Subtotal	*77,530*	*1,995*	*4,536*	*6,531*	*3,842*	*2,362*	*6,204*
Project-Generated VMT Reduction	1.44%	1.44%			1.44%		
Project-Generated Trip TDM Reductions	**(1,116)**	**(29)**	**(66)**	**(95)**	**(55)**	**(34)**	**(89)**

Source: Appendix K1.

Final Trip Generation Summary

The final trip generation estimates are shown in Table 4.17-5. As shown in the table, the Project would generate a total of 76,414 net external trips per day with 6,436 AM net external peak hour trips and 6,115 PM net external peak hour trips. This final trip generation estimate was used in the Project's VMT and LOS analyses, as applicable to the modeling methodology followed in respective studies.

Table 4.17-5. Final Project Trip Generation Estimate

TDM Measure	Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Total Project Trips	105,000	3,841	6,519	10,360	4,941	3,369	8,310
Total Internalization Trips	(22,575)	(1,777)	(1,777)	(3,554)	(856)	(856)	(1,712)
Residential Trip TDM Reductions	(4,853)	(62)	(203)	(265)	(242)	(148)	(390)
Employee Commute Trip TDM Reductions	(42)	(7)	(3)	(10)	(1)	(3)	(4)
Project-Generated Trip TDM Reductions	(1,116)	(29)	(66)	(95)	(55)	(34)	(89)
Final Net External Trip Generation	**76,414**	**1,966**	**4,470**	**6,436**	**3,787**	**2,328**	**6,115**

Source: Appendix K1.

Vehicle Miles Traveled (CEQA Analysis)

The updated CEQA Guidelines (Section 15064.3) state that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts" and define VMT as "the amount and distance of automobile travel attributable to a project." "Automobile" refers to on-road passenger vehicles, specifically cars and light trucks. OPR has clarified in the Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR 2018) (Technical Advisory) and recent informational presentations that heavy-duty truck VMT is not required to be included in the estimate of a project's VMT. Other relevant considerations may include the effects of the project on transit and non-motorized traveled.

The City has adopted VMT analysis guidelines and thresholds (City of Moreno Valley 2020). For the purposes of the Project analysis, the VMT analysis methodology and thresholds identified within the City's TIA Guidelines were used.

VMT Analysis Approach

Per the City's TIA Guidelines, "for purposes of SB 743 compliance, a VMT analysis should be conducted for land use projects as deemed necessary by the Traffic Engineering Department and would apply to projects that have the potential to increase the average VMT per capita/employee compared to the City's threshold. Normalizing VMT per capita/employee provides a transportation efficiency metric that allows the City to compare the project to the remainder of the incorporated area for purposes of identifying transportation impacts" (City of Moreno Valley 2020).

The Project has the potential to increase VMT and is subject to VMT analysis to compare the Project's VMT per capita/employee to the City's threshold to determine if it would result in a significant transportation impact. The City's TIA Guidelines provide criteria to screen projects from VMT modeling assessment under the presumption that they would result in a less than significant transportation impact. These screening criteria and their application are discussed in the analysis below. Projects or parts of a project that do not screen out using the City's VMT screening criteria require a VMT analysis using the RIVCOM model.

The VMT analysis for non-screened uses in the Project were prepared for the following scenarios:

Baseline Condition

- Existing (2023) No Project Conditions
- Existing (2023) Plus Project Conditions

RTP/SCS Based Horizon Year Scenarios

- Horizon Year (2045) (with full Buildout of WLC) No Project Conditions
- Horizon Year (2045) (with full Buildout of WLC) Plus Project Conditions
- Horizon Year (2045) (with partial Buildout of WLC) No Project Conditions
- Horizon Year (2045) (with partial Buildout of WLC) Plus Project Conditions

Active Transportation and Transit Review (CEQA Analysis)

The City's TIA Guidelines also require a review of active transportation and transit facilities to determine if the Project would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreases the performance or safety of such facilities.

4.17.5 Impact Analysis

4.17.5.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR concluded that impacts to traffic and transportation from the original SP 218 were less than significant (City of Moreno Valley 1999). Trip rates from the Institute of Transportation Engineers were used. It was determined that 44,487 daily trips would be generated with implementation of the original SP 218. This would generate 31,822 additional daily trips compared to the City's then-existing General Plan land uses for the site, which would have generated a total of 12,665 daily trips. A pass-by adjustment was applied, reducing the prior project external trips to 39,274, of which 20% would be northbound, 7% would be southbound, 32% would be eastbound, and 41% would be westbound.

LOS is a qualitative measure used to describe the condition of traffic flow and the motorist's perception of roadway performance. It is expressed using a letter designation from A to F, with LOS A being the best operating condition and Level F being the worst. The 1999 EIR found the original SP 218 would result in a potentially significant traffic

impact where it would cause numerous road segments and intersections to operate below LOS D given existing conditions with the project and 2015 forecast traffic.

The original SP 218 proposed bus stops along Cactus Avenue at the intersections with Morrison Street and Nason Street and across from Riverside County General Hospital, along Nason and its intersection with John F Kennedy drive and between John F Kennedy Drive and Iris Street, and at Lasselle Street and John F Kennedy Drive. Impacts to transit were not determined to be significant.

Mitigation

Tables 7, Signal Warrant Analysis; Table 8, Intersection improvements for Year 2015; and Table 9, Street Segment Improvements for Year 2015, of the 1999 EIR provide detailed measures which were required to mitigate traffic impacts of the original SP 218. Among other impacts/improvements identified, the 1999 EIR determined that in the near term, the following intersections would deteriorate in service and required signal warrants and other improvements (City of Moreno Valley 1999):

- Lasselle Street/Cactus Avenue
- Lasselle Street/John F Kennedy Drive

Additionally, by the year 2015, it was predicted that the following intersections would need signalization and other improvements:

- Oliver Street at Brodiaea Avenue
- Oliver Street at Cactus Avenue

The original SP 218 identified improvements to the following streets and intersections:

- Brodiaea Avenue, between Lasselle Street and Morison Street
- Cactus Avenue, between Lasselle Street and Nason Street
- John F Kennedy Drive, between Lasselle Street and Oliver Street
- Iris Avenue, between Nason Street and the Moreno Valley Medical Center
- Oliver Street, between John F. Kenndy Drive and the Moreno Valley Medical Center
- Nason Street, between Cactus and Iris
- Morrison Street, between Brodiaea and John F. Kenndy Drive
- Laselle Street, between Brodiaea and Margaret Avenue

Necessary improvements include the widening or extension of several existing roadways and intersection improvements and would be constructed to City standards. With the mitigation measures implemented, the 1999 EIR found that no significant impacts related to traffic circulation would result.

2003 Supplemental EIR

Analysis

A writ of mandate required the 2003 Supplemental EIR to re-evaluate cumulative traffic impacts in light of the March Air Force Reserve Base Reuse Plan and the Moreno Highlands Specific Plan. The March Air Reserve Base is located approximately 2 miles west of the Specific Plan Area and it was determined that a total of 8% of its project-generated trips entered the original SP 218 study intersections via Alessandro Boulevard, Cactus Avenue, and John F Kennedy Drive. The Moreno Highlands Specific Plan is located approximately 2 miles east of the Specific Plan Area and it was determined that a total of 19% of its project-generated trips entered passed through the original SP 218 study area. The updated traffic analysis did not result in new deficiencies for the 2015 cumulative condition at any of the study intersections or roadway sections; therefore, the 2003 Supplemental EIR did not result in any significant new, or substantially greater, impacts to traffic beyond those identified in the 1999 EIR (City of Moreno Valley 2003).

Mitigation

No additional mitigation was required.

2005 Addendum

Analysis

The 2005 Addendum found the project modification to an active adult community proposed by the 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) would generate approximately 13,292 daily trips, which is 55% less than the traffic generated from the original SP 218. The 2005 Aquabella SPA included a minimum of 7-foot-wide parkways plus 5-foot sidewalks for internal roads. The 2005 Aquabella SPA eliminated John F Kennedy Drive through the project boundaries, removed Morrison Street south of Cactus Avenue, and realigned Nason Street (per Resolution No. 2005-111).

The traffic study in the 2005 Addendum examined 47 intersections within the study area and concluded that no study area intersections other than those identified in the original SP 218 traffic study would operate below LOS C with implementation of the 2005 Aquabella SPA in year 2015 (City of Moreno Valley 2005). No worsened or new significant impacts would result.

Mitigation

No additional mitigation was required.

4.17.5.2 Project Impact Analysis

Threshold 1: Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

2040 General Plan Circulation Element and General Plan Consistency

As described in this section and in Section 4.11, Land Use and Planning, Table 4.11-1, the Project is consistent with the goals and policies of the 2040 General Plan Circulation Element described in Section 4.17.2, and specifically goals and policies under C1 and C3.

The Project would be consistent with the 2040 General Plan Circulation Network and would construct the following ultimate improvements as design features in conjunction with development of each PA. Additionally, intersection improvements would be constructed as design features in conjunction with development of each PA. Refer Section 8.2, Intersection Access Improvements, of Appendix K3.

Planning Area 1

- Project would improve Brodiaea Avenue between Lasselle Street and Morrison Street to achieve its ultimate full section as a Neighborhood Collector (66-foot right-of-way), including parkway and sidewalk adjacent to the site, in conjunction with access intersection improvements listed below. A Class III bike route should be anticipated along Brodiaea Avenue with appropriate signs and/or pavement markings.
- Project would construct Morrison Street from Brodiaea Avenue to Cactus Avenue at its ultimate half section width (west side) as an Arterial (100-foot right-of-way) with parkway and sidewalk adjacent to the site. The interim cross-section may require east side improvements to accommodate at least one northbound through lane.
- Project would complete the north side parkway of Cactus Avenue along the PA-1 frontage at its ultimate full section-width as a Minor Arterial (88-foot right-of-way) consistent with City standards, in conjunction with access intersection improvements (see Section 8.2 of Appendix K3).

Planning Area 2

- Project would improve the south side parkway of Cactus Avenue along the PA-2 frontage, including sidewalk adjacent to the site at its ultimate full section-width as a Minor Arterial (88-foot right-of-way) consistent with City standards, in conjunction with access intersection improvements associated with the Lasselle Street/Cactus Avenue intersection and the Nason Street/Cactus Avenue intersection (see Section 8.2 of Appendix K3)
- Project would improve the east side parkway of Lasselle Street along the PA-2 frontage, including sidewalk adjacent to the site at its ultimate full section-width as an Arterial (100-foot right-of-way) consistent with City standards, in conjunction with access intersection improvements (see Section 8.2 of Appendix K3).
- Project would improve the west side parkway of Nason Street along the PA-2 frontage, including sidewalk adjacent to the site consistent with City standards for a four-lane Divided Arterial (110-foot right-of-way) in conjunction with access intersection improvements (see Section 8.2 of Appendix K3).

Planning Area 3

- Project would complete the east side parkway of Nason Street along the PA-3 frontage adjacent to the site consistent with City standards for a four-lane Divided Arterial (110-foot right-of-way) in conjunction with access intersection improvements (see Section 8.2 of Appendix K3).
- Project would improve the south side parkway of Delphinium Avenue between Nason Street and Evergreen Street to provide a sidewalk with potential pedestrian connectivity into the site.

Planning Area 4

- Project would improve Oliver Street from north of John F Kennedy Drive to Filaree Avenue at its ultimate half section width (west side) as a Minor Arterial (88-foot right-of-way) with an additional southbound through travel lane as well as parkway and sidewalk adjacent to the site, in conjunction with access intersection improvements (see Section 8.2 of Appendix K3).

Planning Area 5

- Project would improve the west side parkway of Nason Street along the PA-5 frontage, including sidewalk adjacent to the site consistent with City standards for a four-lane Divided Arterial (110-foot right-of-way) in conjunction with access intersection improvements (see Section 8.2 of Appendix K3).
- Project would complete the north side parkway of Iris Avenue along the PA-5 frontage, in conjunction with access intersection improvements (see Section 8.2 of Appendix K3).

The TA (Appendix K3) provides analysis of the Project's potential effects relative to 2040 General Plan consistency with LOS policies used by the City over each of the study intersections. Pursuant to California Public Resources Code Section 21099(b)(2) and CEQA Guidelines Section 15064.3(a), a project's effect on automobile delay is not considered a significant environmental effect, and therefore, no further discussion is required or provided.

Bike and Pedestrian Facilities and Transit

The Project would improve and enhance active transportation and transit access and facilities in the focus traffic study area, consistent with 2040 General Plan Circulation Element policies. The Project would improve the adjacent streets with continuous sidewalks, along with providing an extensive walkable network of sidewalks, promenades, and trails within the Project site. The internal street network would follow a grid pattern with approximately 600-foot block lengths to provide a street network similar to a downtown, urban area. Intersection density is a proxy for street connectivity, which helps to facilitate a greater number of shorter trips including those made by walking, biking, and scooter. The internal street network will include a comprehensive sidewalk network to facilitate walking. The Project would promote the use of the existing bike network along circulation element roadways in the focus study area and construct a Class III bike route along Brodiaea Avenue. Internal streets within the Project would facilitate bike routes and connectivity to the existing bike network. Access to all existing trails would be provided. The internal street network would contain an extensive bike network with Class II, buffered Class II, and off-street paths, and would connect to the broader Moreno Valley bike network and support proposed micromobility modes. PDF-TRANS-5 and PDF-TRANS-7 would further promote bike use through a bikeshare program and end-of-route facilities such as bike lockers and showers.

The Project proposes to work with RTA to improve existing route frequencies, service hours and routes that would expand the transit system throughout the Project, surrounding school, medical uses, nearby industrial employment centers, and the broader Moreno Valley. The Project recognizes that a major future employer of the City will be the

WLC and that providing transit access from the Project to WLC during hours of operation is a primary focus of coordination with RTA. See PDF-TRANS-9 through PDF-TRANS-12 in Section 4.17.5.

The Project would not interfere with existing plans or policies and is anticipated to implement certain policies that may not occur without the Project, such as C.4-3: Support the Establishment of a Transit Center/Mobility Hub in the Downtown Center.

In sum, the Project is consistent with the 2040 General Plan's adopted policies, plans, or programs regarding active transportation or public transit facilities, and the Project is anticipated to improve the performance and safety of such facilities.

Therefore, the Project would result in a **less than significant** impact related to conflicts with the 2040 General Plan addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Regional Transportation Plan

The following goals of Connect SoCal are evaluated for Project's consistency with the current RTP/SCS (SCAG 2020):

Goal 1: Encourage regional economic prosperity and global competitiveness.

Goal 2: Improve mobility, accessibility, reliability, and travel safety for people and goods.

Goal 3: Enhance the preservation, security, and resilience of the regional transportation system.

Goal 4: Increase person and goods movement and travel choices within the transportation system.

Goal 5: Reduce greenhouse gas emissions and improve air quality.

Goal 6: Support healthy and equitable communities.

Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.

Goal 8: Leverage new transportation technologies and data-driven solutions that result in more efficient travel.

Goal 9: Encourage development of diverse housing types in areas that are supported by multiple transportation options.

Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats.

The Project would provide residential land use, specifically workforce housing, by constructing multifamily units together with new roadways, bike, and pedestrian facilities, which would improve mobility and accessibility within the City. It would support full-time jobs and contribute to the economic prosperity of the region and enhance global competitiveness. By adding housing to an area with future job potential (e.g., buildout of the World Logistics Center), the Project would contribute to balancing the City's jobs-housing ratio. The Project supports the World Logistics Center, which incorporates use of designated truck routes to enhance the regional transportation network for goods movement. The 25 acres of active sports park and 15 acres of park and lake promenade proposed in the Project would support healthy and equitable communities. The proposed Mobility Hub and promotion of micromobility modes such as bikeshare and electric scooter along internal street network of the Project would leverage new transportation technologies and solutions to efficient travel for the Project occupants. The Project is consistent with

the transportation-related goals and policies of Connect SoCal, and the does not conflict with anything related to the circulation system.

While the Project would be consistent with the policy framework and goals of Connect SoCal, Connect SoCal also incorporates local land use projections and circulation networks in city and county general plans. Because the Project is approximately 12,000 units more than what is currently programmed in the RTP/SCS within the Project site boundary, and because the major cumulative project in its vicinity—World Logistics Center—is not included in its entirety within the current RTP/SCS, the Project's consistency with the current RTP/SCS was evaluated in the Horizon Year VMT analysis provided under Threshold 2. The results of the Horizon Year analysis indicated a less than significant VMT impact. Therefore, through consistency with Connect SoCal policies and because the Project would not significantly impact Horizon Year VMT analyzed in the RTP/SCS, Project impact related to consistency with SCAG's Connect SoCal would be **less than significant.**

Impact Determination

Therefore, as shown in the consistency analysis with all the applicable regional and local plans addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, the Project's impact would be **less than significant**.

Threshold 2: Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

The following discusses the Project's VMT screening, analysis and impact determination and its consistency with CEQA Guidelines Section 15064.3(b).

VMT Screening

The City's TIA Guidelines state the following criteria can be applied to effectively screen projects from project-level VMT assessment under the presumption that they would result in a less than significant transportation impact (City of Moreno Valley 2020):

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

These screening criteria are discussed in more detail below.

Transit Priority Area Screening

Projects that are within 0.5 miles of an existing major transit stop[3] or an existing stop along a high-quality transit corridor[4] are considered in a TPA. While the Project proposes to significantly increase the quantity of transit service lines and improve headways in the area, since those lines are not currently in operation and are run by a third party not in control by the Project, TPA screening was not applied to the Project. However, it is anticipated that, at

[3] California Public Resources Code Section 21064.3 - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[4] California Public Resources Code, Section 21155 - For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

complete buildout of the Project, with the implementation of the proposed BRT along Alessandro Boulevard and development of the proposed mobility hub within the Project boundary, the Project could qualify as a TPA.

Low VMT Area Screening

Projects located in Transportation Analysis Zones (TAZs) that generate VMT per capita below the City's threshold of significance are eligible for Low VMT Area Screening using the Western Riverside Council of Governments (WRCOG) VMT screening tool. Additional criteria need to be met for eligibility, such as developing similar land uses that already exist in the low VMT zone. Since the Project is proposed on vacant land, it is not eligible for Low VMT Area Screening, as the TAZ for the Project does not contain any existing land use for determining consistency.

Project Type Screening

Consistent with the project types identified in the City's TIA Guidelines, the following components of the Project were screened out using Project Type Screening:

- Local-serving retail less than 50,000 SF
- Local-serving K-12 schools
- Local parks
- Local-serving hotels (e.g., non-destination hotels)

Screening Determination

The proposed 49,900 square feet of retail, elementary and middle/junior high schools, 40 acres of parks, and 300-room hotel were screened from the VMT analysis because they are all local serving uses, consistent with the City's TIA Guidelines. These needs would exist with or without the Project, such that they don't represent an increase in VMT. As noted above, buildout of the Project may also qualify the Project site as a TPA due to increased transit service and connectivity to/from the site; however, this will require cooperation from RTA, which the Project applicant cannot guarantee at this time. For this reason, TPA screening was not assumed. Low VMT screening was also not met.

Given the above referenced results of the VMT screening effort, a full VMT modeling and forecasting effort was prepared for the residential component of the Project per the City's TIA guidelines, as described below.

VMT Analysis

As required in the City's TIA guidelines, this transportation impact analysis presents Project-generated VMT and evaluates the Project's effect on VMT. Project-generated VMT presents trips and trip distances of specific trip purposes—in this case residential home-based trips. The effect on VMT is an estimate of how VMT within the region will change once a project is built and new and existing traffic redistributes.

Project-generated VMT was estimated for non-screened land uses using the Production/Attraction method described in Appendix K2. The Production/Attraction method allows project VMT to be evaluated based on trip purpose, which is consistent with OPR recommendations in the Technical Advisory and consistent with the City's VMT methodology requirements. Project-generated VMT is presented for the residential uses, normalized by the resident population, and compared to the City's adopted threshold of significance (described in Section 4.17.3 above) to determine potential transportation impacts.

Project effect on VMT was estimated with and without the Project within multiple regional areas to compare the traffic redistribution with the Project. Since the Project is located at the south edge of the City boundary, a ten-mile radius (the approximate average Project trip length) surrounding the Project was selected as the analysis boundary to better cover the trip length coming from and to the Project site. Boundary VMT estimates were normalized by the service population—that is, the summation of the residents and employees within a boundary—for comparative purposes and to determine potential transportation impacts. Normalization by the service population within the boundary allows for an apples-to-apples comparison between with and without Project conditions.

VMT Modeling Methodology

The RIVCOM model was utilized to prepare VMT forecasts for the analysis scenarios. RIVCOM is a trip-based (four-step) travel demand forecasting model. RIVCOM is WRCOG's latest update to the Riverside County Transportation Analysis Model (RIVTAM) and consistent with Connect SoCal 2020, SCAG's 2020 RTP/SCS. RIVCOM uses a model base year of 2018 and model future year of 2045 and is considered the most appropriate model for use for Project VMT modeling due to its most recent land use and roadway information. The future year model land use dataset was reviewed against the City of Moreno Valley's pending and approved development project list to ensure all projects were reflected in future assumptions. The Project is located in TAZ 1242 (see Figure 4.17-6).

While the City has identified RIVCOM as the most appropriate tool to prepare VMT estimates, it is a macroscopic model that lacks sensitivity to the Project Design Features and TDM measures proposed. For example, RIVCOM does not take into account bike lanes or bike share, does not account for intersection density, and does not unbundle residential parking costs from property costs. To more accurately reflect the Project trip-making behavior resulting from these design features, the model assignment outputs were post-processed by traffic consultants Feh & Peers. The RIVCOM Project TAZ traffic assignment does not account for the internalization or mode shift estimated in the Project's trip generation estimates that consider its mixed-use nature, site design, and the effect of proposed TDM measures. As described previously in Section 4.17.4, and provided in Appendix K1, appropriate reductions were taken to the trip generation estimates to account for on-site internalization, shifts to active modes and transit, and the relationship between the adjacent medical centers and the existing high school. The Project TAZ trip tables were adjusted to reflect the same intrazonal relationship as estimated in the Project trip generation estimates.

Following review of preliminary model runs, Fehr & Peers found that RIVCOM did not account for the anticipated relationship between the WLC and the Project, given that the intent of the Project is to serve substantially as workforce housing for WLC employees and both projects are being developed by related landowners. Following discussions with the Project team, Fehr & Peers adjusted the RIVCOM trip tables to reflect the Project's synergy with WLC. See Appendices K1 and K2 for details. Since the WLC does not exist in existing conditions, this relationship was only adjusted in the horizon year (2045) conditions modeling.

VMT Analysis Scenarios

As recommended in the City's TIA Guidelines and discussions with the City staff, the VMT estimates were prepared for the following scenarios. The detailed report is included as Appendix K2:

Baseline Condition

- Existing (2023) No Project Conditions (Appendix K2)
- Existing (2023) Plus Project Conditions (Appendix K2)

RTP/SCS Based Horizon Year Scenarios

- Horizon Year (2045) (with full Buildout of WLC) No Project Conditions (Appendix K2)
- Horizon Year (2045) (with full Buildout of WLC) Plus Project Conditions (Appendix K2)
- Horizon Year (2045) (with partial Buildout of WLC) No Project Conditions (Appendix K2)
- Horizon Year (2045) (with partial Buildout of WLC) Plus Project Conditions (Appendix K2)

The No Project Conditions model runs were used to estimate Citywide averages and the Plus Project Conditions model runs were used to estimate Project VMT. To estimate year 2023 conditions, data was interpolated between base year (2018) and future year (2045) model runs.

VMT Estimates

This section summarizes the results of the Project-generated (using Production/Attraction method)[5] VMT and effect on VMT (using Boundary method)[6] modeling.

Existing Year Conditions

Existing (2023) Project-Generated Home Based (HB) VMT estimates are provided in Table 4.17-6 and Existing (2023) boundary method VMT estimates are provided in Table 4.17-7. The Existing (2023) Project HB VMT per resident (13.0) is estimated to be approximately 17% lower than the Citywide average HB VMT per resident (15.8).

Table 4.17-6. Existing (Year 2023) Project-Generated VMT Estimates

Criteria	Citywide Average	Project
Home-Based VMT	3,435,654	561,566
Residents	217,095	43,050
HB VMT/Resident	15.8	13.0
	Potentially Significant	**No**

Source: Appendix K2.

5 Production/Attraction Method: The Production/Attraction methodology is utilized to estimate project-generated VMT. The Production/Attraction method for calculating VMT sums all weekday VMT generated by trips with at least one trip end in the study area by trip purpose. The Production/Attraction method tracks these trips to/from their ultimate destination unless that destination is outside of the model boundary area. Productions are land use types that generate trips (residences) and attractions are land use types that attract trips (employment). Productions and attractions are converted from person trips to vehicle trips for the purposes of calculating VMT. The Production/Attraction method allows project VMT to be evaluated based on trip purpose which is consistent with OPR recommendations in the Technical Advisory and consistent with the City's VMT methodology requirements. PA VMT estimates are not consistent with total Origin-Destination (OD) VMT utilized in Greenhouse Gas (GHG) impact analysis. Therefore, for the Project's GHG impact analysis, trip generation and trip length data in addition to the OD VMT has been provided separately.

6 Boundary Method: The boundary method is utilized to measure the Project's effect on VMT. The boundary method is the sum of all weekday VMT on a roadway network within a designated boundary. Boundary method VMT estimates VMT by multiplying the number of trips on each roadway segment by the length of that segment. This approach includes all trips, including those trips that do not begin or end in the designated boundary. This is the only VMT method that captures the effect of cut-through and/or displaced traffic. Since the Project is located at the south edge of the City boundary, a ten-mile radius (the approximate average project trip length) geography surrounding the Project was selected as the analysis boundary to better cover the trip length coming from and to the Project site. Boundary VMT for impact determination should be normalized by the service population (summation of residents and employees within a designated boundary) within the boundary to make an apples to-apples comparison between with and without project conditions.

As shown in Table 4.17-7, the Existing (2023) City Boundary VMT per service population with Project (8.3) is estimated to be approximately 7.0% lower than without the Project (9.0), and the Existing (2023) 10-Mile Boundary VMT per service population with Project (17.0) is estimated to be approximately 5.0% lower than without the Project (17.9).

Table 4.17-7. Existing (2023) Boundary VMT Estimates

Jurisdiction	Without Project	With Project
City Boundary VMT	2,366,765	2,559,970
City Service Population	264,202	307,401
City Boundary VMT/Service Population	9.0	8.3
10-Mile Boundary VMT	10,195,386	10,456,417
10-Mile Service Population	571,024	614,223
10-Mile Boundary VMT/Service Population	17.9	17.0
	Potentially Significant	**No**

Source: Appendix K2.

Because the Project's VMT per capita under Existing with Project conditions would not exceed the Citywide per capita VMT for Moreno Valley under Existing conditions, the Project would result in a **less than significant** VMT impact under Existing Year conditions. The Project effect on VMT for Existing Year conditions would also be considered **less than significant** as with Project VMT per service population within the Citywide and ten-mile radius does not exceed the VMT per service population without the Project.

RTP/SCS Based Horizon Year Scenarios

VMT estimates were prepared for two Horizon Year (2045) scenarios: Full buildout of WLC and Partial Buildout of WLC. The results of VMT analysis for both horizon year scenarios are provided in this section.

Horizon Year (2045) with Full Buildout of WLC

The VMT analysis of Horizon Year (2045) with Full Buildout of WLC assumes that approximately 25% of the 22,653 forecast (year 2045) employees at WLC would live at the Project. This would equate to 5,663 Project residents (13% of Project residents or 37% of Project households).

Horizon Year (2045) Project-Generated Home Based (HB) VMT estimates are provided in Table 4.17-8 and Horizon Year (2045) boundary method VMT estimates are provided in Table 4.17-9. As shown in Table 4.17-8, the Horizon Year (2045) Project HB VMT per resident (12.2) is estimated to be approximately 20% lower than the Citywide average HB VMT per resident (15.4).

Table 4.17-8. Horizon Year (2045) Project-Generated VMT Estimates with Full Buildout of WLC

Criteria	Citywide Average	Project
Home-Based VMT	4,145,715	523,425
Residents	269,507	43,050
HB VMT/Resident	15.4	12.2
	Potentially Significant	**No**

Source: Appendix K2.

As shown in Table 4.17-9, the Horizon Year (2045) City Boundary VMT per service population with Project (8.6) is estimated to be approximately 7.0% lower than without the Project (9.2), and the Horizon Year (2045) 10-Mile Boundary VMT per service population with Project (17.9) is estimated to be approximately 4.0% lower than without the Project (18.6).

Table 4.17-9. Horizon Year (2045) Boundary VMT Estimates with Full Buildout of WLC

Jurisdiction	Without Project	With Project
City Boundary VMT	3,174,259	3,352,226
City Service Population	345,221	389,122
City Boundary VMT/Service Population	9.2	8.6
10-Mile Boundary VMT	14,963,480	15,189,945
10-Mile Service Population	804,853	848,754
10-Mile Boundary VMT/Service Population	18.6	17.9
	Potentially Significant	**No**

Source: Appendix K2.

Because the Project's VMT per capita or resident under Horizon Year (2045) with Project conditions would not exceed the Citywide per capita VMT for Moreno Valley under Horizon Year (2045) conditions, the Project would result in a **less than significant** VMT impact under Horizon Year conditions with Full Buildout of WLC. The Project effect on VMT would also be considered **less than significant** as with Project VMT per service population within the Citywide and ten-mile radius in Horizon Year does not exceed the VMT per service population without the Project in Horizon Year with Full Buildout of WLC.

Horizon Year 2045 with Partial Buildout of WLC

The partial buildout of WLC assumes 33% of the 11,503 forecast (year 2045) employees at WLC would live at the Project. This would equate to 3,834 Project residents (9% of Project residents or 25% of Project households). Horizon Year (2045) Project-Generated Home Based (HB) VMT estimates are provided in Table 4.17-10 and Horizon Year (2045) boundary method VMT estimates are provided in Table 4.17-11. As shown in Table 4.17-10, the Horizon Year (2045) Project HB VMT per resident (12.4) is estimated to be approximately 20.0% lower than the Citywide average HB VMT per resident (15.4).

Table 4.17-10. Horizon Year (2045) Project-Generated VMT Estimates with Partial Buildout of WLC

Criteria	Citywide Average	Project
Home-Based VMT	4,161,213	533,653
Residents	269,507	43,050
HB VMT/Resident	15.4	12.4
	Potentially Significant	**No**

Source: Appendix K2.

As shown in Table 4.17-11, the Horizon Year (2045) City Boundary VMT per service population with Project (8.8) is estimated to be approximately 7.0% lower than without the Project (9.5), and the Horizon Year (2045) 10-Mile Boundary VMT per service population with Project (18.1) is estimated to be approximately 4.0% lower than without the Project (19.0).

Table 4.17-11. Horizon Year (2045) Boundary VMT Estimates with Partial Buildout of WLC

Jurisdiction	Without Project	With Project
City Boundary VMT	3,168,284	3,336,295
City Service Population	334,071	377,925
City Boundary VMT/Service Population	9.5	8.8
10-Mile Boundary VMT	15,068,796	15,201,457
10-Mile Service Population	793,703	837,557
10-Mile Boundary VMT/Service Population	19.0	18.1
	Potentially Significant	**No**

Source: Appendix K2.

Because the Project's VMT per capita or resident under Horizon Year (2045) with Project conditions would not exceed the Citywide per capita VMT for Moreno Valley under Horizon Year (2045) conditions, the Project would result in a **less than significant** VMT impact under Horizon Year condition with Partial Buildout of WLC. The Project effect on VMT would also be considered less than significant as with Project VMT per service population within the Citywide and ten-mile radius in Horizon Year does not exceed the VMT per service population without the Project Horizon Year with Partial Buildout of WLC.

VMT Impact Determination

As shown above, per the City's VMT significance criteria for impact determination, the Project would have a less than significant VMT impact under Existing (2023), Horizon Year (2045) with full buildout of WLC, and Horizon Year (2045) with partial buildout of WLC. The Project effect on VMT was also determined to be less than significant under all scenarios. Therefore, the Project would not conflict with CEQA Guidelines Section 15064.3(b) related to the VMT threshold. Impacts would be **less than significant**.

Threshold 3: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?

Project potential for increased hazards could result from geometric design features of the Project and/or as a result of the addition of Project traffic to Caltrans facilities. Vehicular access to the Project would be provided directly from various intersections identified on Figure 4.17-1 and would serve as the primary entrance to each of the five PAs.

It is anticipated that there would be two full access locations for PA-1:

- PA-1 Access 1, the north leg of intersection no. 34 on Cactus Avenue
- PA-1 Access 2, the south leg of intersection no. 33 on Brodiaea Avenue opposite the future extension of Darwin Drive from Alessandro Boulevard to Brodiaea Avenue.

There would be seven proposed full access locations for analysis of PA-2:

- PA-2 Access 1, the south leg of intersection no. 34 on Cactus Avenue.
- PA-2 Access 2, the south leg of intersection no. 16 on Cactus Avenue at the S. Hospital Access.
- PA-2 Access 3, the west leg of intersection no. 20 on Nason Street at Delphinium Avenue.
- PA-2 Access 4, the west leg of intersection no. 36 on Nason Street.
- PA-2 Access 5, the west leg of intersection no. 37 on Nason Street.
- PA-2 Access 6, the extension of John F Kennedy Drive east of Lasselle Street and east of the existing high school entrance.
- PA-2 Access 7, the east leg of intersection no. 11 on Lasselle Street at Delphinium Avenue.

There would be three full access intersections for PA-3:

- PA-3 Access 1, the east leg of intersection no. 36 on Nason Street.
- PA-3 Access 2, the west leg of intersection no. 25 on Oliver Street at John F Kennedy Drive.
- PA-3 Access 3, the east leg of intersection no. 35 on Nason Street

There would be two full access intersections for PA-4:

- PA-4 Access 1, the east leg of intersection no. 38 on Nason Street.
- PA-4 Access 2, the west leg of intersection no. 41 on Oliver Street

There would be two right turn in/out only access driveways for PA-5:

- PA-5 Access 1, the north leg of restricted intersection no. 40 on Iris Avenue.
- PA-5 Access 2, the west leg of restricted intersection no. 39 on Nason Street.

A level of service analysis was conducted to evaluate the ability of the Project to accommodate the anticipated traffic levels at the main Project access intersections. In addition, a signal warrant analysis was conducted at unsignalized intersections (existing and future) to see if they would trigger the need for a traffic signal using the peak hour volumes per CA Manual on Uniform Traffic Control Devices (MUTCD) (Caltrans 2014) methodology or future average daily traffic (ADT) volumes, per Caltrans planning level ADT-based signal warrant analysis.

Intersection access improvements have been included in Section 8.2 of Appendix K3, which would ensure the intersections do not present a danger or hazard related to intersection geometry and operations. Sight distance at each Project access would be reviewed with respect to Caltrans and City sight distance standards at the time of preparation of final grading, landscape, and street improvement plans. The Project would be subject to all applicable City road standards and all internal and external roadways would be improved or constructed consistent with all road alignment, access, traffic control, and safety requirements pertaining to ingress and egress onto the overall circulation system, ensuring the Project would not create sharp curves or dangerous intersections. Further, internal roadways would be developed consistent with the infrastructure and design guidelines set forth in the Specific Plan Amendment (Appendix A to this SEIR), which outlines a conceptual circulation plan and provides for the integration of traffic calming features such as roundabouts and medians to improve safety and promote pedestrian and bicycle travel. The Project shall install safety countermeasures such traffic signal head retroreflective backplates, new warning and regulatory signage, object markers, yellow edgeline striping, yellow median nose paint, leading

pedestrian interval traffic signal timing changes, advanced stop bar before crosswalk, and high visibility crosswalk striping at new intersections and/or traffic signals, per City's initiatives for improving safety.

Off-Ramp Queuing

At Caltrans facilities, the 95th percentile vehicle queues were assessed at off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the I-215 ramps and SR-60 interchanges in the traffic study area. Specifically, the queuing analysis was used to identify any potential queuing and "spill back" onto the I-215 mainline from the off-ramps, which would be considered a hazard. A queuing analysis was performed for the following off-ramp intersections:

- I-215 SB Ramps and Alessandro Blvd (no. 44)
- I-215 NB Ramps and Alessandro Blvd (no. 45)
- I-215 SB Ramps and Cactus Av. (no. 54)
- I-215 NB Ramps and Cactus Av. (no. 55)
- Nason St. and SR-60 WB Ramps (no. 81)
- Nason St. and SR-60 EB Ramps (no. 82)
- Redlands Bl. and SR-60 WB Ramps (no. 87)
- Redlands Bl. and SR-60 EB Ramps (no. 88)

The analysis was conducted for Existing conditions, Horizon Year 2045 without Project, and Horizon Year 2045 with Project conditions and with full buildout of WLC to provide the most conservative analysis (Appendix K3).

As shown in Table 4.17-12, the analysis indicates there are currently, under Existing Conditions, no queuing issues that may potentially "spill back" onto the I-215 and SR-60 mainline at the study area interchanges. No spillback onto I-215 or SR-60 mainline is anticipated due to sufficient storage lengths available in the adjacent lanes under Existing conditions analyzed in the TA.

Certain planned interchange improvements were assumed to be constructed in the Horizon Year 2045 queuing analysis. For the I-215 interchange at Cactus Avenue, an interchange redesign with bridge widening to 6 lanes is anticipated in the Traffic Impact Analysis for Kaiser Permanente Moreno Valley Medical Center Master Plan Project (LSA 2019) with fair share or TUMF contribution. Improvements to the Redlands interchange with the SR-60 freeway are anticipated and planned in the Traffic Impact Analysis Report for The World Logistics Center (WSP 2018). For the SR-60 westbound ramps at Redlands Boulevard, the WLC project is anticipated to reconstruct the interchange as a partial cloverleaf design, which includes a second through lane northbound and southbound on Redlands Boulevard in the interchange area, along with a direct (slip) on-ramp from Redlands Boulevard to the eastbound ramp and a direct (slip) on-ramp from Redlands Boulevard to the westbound ramp. All the interchange improvements were assumed to be constructed in the Horizon Year 2045 queuing analysis. The Project's fair share contribution to ramp intersection nos. 54, 55, 82, 87 and 88 has been calculated and provided in Table 8-1, Summary of Off-Site Intersection Improvements by Analysis Scenario, in Appendix K3.

Table 4.17-13 summarizes the queuing analysis conducted at the off-ramp intersections under Horizon Year (2045) conditions without and with Project conditions. No spillback onto I-215 or SR-60 mainline is anticipated due to sufficient storage lengths available in the turn lanes or in adjacent lanes where queues could exceed storage length under all the scenarios analyzed in the TA. Therefore, the potential of the off-ramp queues in the peak hour to

extend into the I-215 or SR-60 freeway mainline would not occur. Therefore, a review for speed differential between the off-ramp queue and the mainline of the freeway during the same peak hour would not be warranted per Caltrans requirement.

Table 4.17-12. Peak hour Freeway Off-Ramp Queuing – Summary for Existing Conditions

Intersection	Movement[3]	Available Stacking Distance (Feet)[3]	Existing Conditions			
			95th Percentile Queue (Feet)		Acceptable?[1]	
			AM	PM	AM	PM
I-215 SB Ramps and Alessandro Blvd. (No. 44)	SBL	530	60	90	Yes	Yes
	SBL/R	1,040	53	93	Yes	Yes
	SBR	530	50	86	Yes	Yes
I-215 NB Ramps and Alessandro Blvd (No. 45)	NBL	380	282[2]	181	**No**[3]	Yes
	NBL/R	1,300	296[2]	184	Yes	Yes
	NBR	380	29	49	Yes	Yes
I-215 SB Ramps and Cactus Av. (No. 54)	NBR	1,900	Nom	95	Yes	Yes
	SBR	1,125	143	18	Yes	Yes
I-215 NB Ramps and Cactus Av. (No. 55)	NBL	130	424[3]	91	**No**[3]	Yes
	NBT	1,700	305	141	Yes	Yes
	NBR	2,175	NOM	NOM	Yes	Yes
Nason St. and SR-60 WB Ramps (no. 81)	WBL	1,350	134	226[2]	Yes	Yes
	WBT	1,690	15	26	Yes	Yes
	WBR	170	NOM	NOM	Yes	Yes
Nason St. and SR-60 EB Ramps (No. 82)	EBL	780	31	66	Yes	Yes
	EBT/R	1,260	171[2]	101	Yes	Yes
	EBR	250	168[2]	98	Yes	Yes
Redlands Bl. and SR-60 WB Ramps (No. 87)	WBL/T/R	1,250	NOM	32	Yes	Yes
Redlands Bl. and SR-60 EB Ramps (No. 88)	EBL/R	1,430	123	250[2]	Yes	Yes

Source: Appendix K3.
Notes: NOM = Nominal, less than 10 ft.
1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An Additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.
2 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.
3 Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent lane has sufficient storage to accommodate any spillover without spilling back and affecting the Freeway mainline.

Table 4.17-13. Peak hour Freeway Off-Ramp Queuing – Summary for Horizon Year (2045) Conditions

Intersection	Movement[3]	Available Stacking Distance (Feet)[3]	Horizon Year 2045 Without Project (with Full Buildout of WLC)				Horizon Year 2045 With Project (with Full Buildout of WLC)			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM	PM	AM	PM	AM	PM	AM	PM
I-215 SB Ramps and Alessandro Blvd. (No. 44)	SBL	530	103	104	Yes	Yes	103	104	Yes	Yes
	SBL/R	1,040	97	115	Yes	Yes	97	115	Yes	Yes
	SBR	530	91	106	Yes	Yes	91	106	Yes	Yes
I-215 NB Ramps and Alessandro Blvd (No. 45)	NBL	380	648[2]	293[2]	No[3]	Yes	655[2]	293[2]	No[3]	Yes
	NBL/R	1,300	693[2]	300[2]	Yes	Yes	702[2]	300[2]	Yes	Yes
	NBR	380	121	131	Yes	Yes	122	131	Yes	Yes
I-215 SB Ramps and Cactus Av. (No. 54)	NBR	1,900	130	389[2]	Yes	Yes	231[2]	597[2]	Yes	Yes
	SBR	1,125	466[2]	70	Yes	Yes	482[2]	90	Yes	Yes
	SBR	500	462[2]	69	Yes	Yes	478[2]	90	Yes	Yes
I-215 NB Ramps and Cactus Av. (No. 55)	NBL	130	440[2]	97	No[3]	Yes	464[2]	97	No[3]	Yes
	NBT	1,700	333	154	Yes	Yes	341	154	Yes	Yes
	NBR	2,175	NOM	NOM	Yes	Yes	NOM	NOM	Yes	Yes
Nason St. and SR-60 WB Ramps (No. 81)	WBL	1,350	228	304	Yes	Yes	210	349	Yes	Yes
	WBT	1,690	24	37	Yes	Yes	19	34	Yes	Yes
	WBR	170	NOM	NOM	Yes	Yes	NOM	NOM	Yes	Yes
Nason St. and SR-60 EB Ramps (No. 82)	EBL/T	780	49	329[2]	Yes	Yes	51	329[2]	Yes	Yes
	EBR	1,260	589[2]	446	Yes	Yes	731[2]	694[2]	Yes	Yes
	EBR	250	NOM	NOM	Yes	Yes	NOM	NOM	Yes	Yes
Redlands Bl. and SR-60 WB Ramps (No. 87)	WBL	1,350	77	83	Yes	Yes	84	96	Yes	Yes
	WBT	1,690	NOM	NOM	Yes	Yes	NOM	NOM	Yes	Yes
	WBR	170	NOM	NOM	Yes	Yes	NOM	NOM	Yes	Yes
Redlands Bl. and SR-60 EB Ramps (No. 88)	EBL	1,350	94	146	Yes	Yes	92	145	Yes	Yes
	EBR	1,690	NOM	NOM	Yes	Yes	NOM	NOM	Yes	Yes
	EBR	170	84	49	Yes	Yes	90	64	Yes	Yes

Source: Appendix K3.

Notes: NOM = Nominal, less than 10 ft.

1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An Additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

2 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

3 Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent lane has sufficient storage to accommodate any spillover without spilling back and affecting the Freeway mainline.

Therefore, the Project would not increase hazards because of a roadway design feature or incompatible uses and impact would be **less than significant**.

Threshold 4: Would the Project result in inadequate emergency access?

The Project site is not located within a State Responsibility Area or Very High Fire Hazard Severity Zone (VHFHSZ). Wildland urban interface areas are located approximately 0.6 miles to the southeast of the Project site and approximately 1.1 miles east of the Project site, where the City abuts the Lake Perris State Recreation Area. These areas are designated as Local Responsibility Area, VHFHSZ, and State Responsibility Area VHFHSZ and High Fire Hazard Severity Zone. The Project site is separated from these areas by urban development. The Project site is also depicted as "Downtown Center" in the City's 2040 General Plan EIR (see Figure 4.18-1, California Fire Hazard Severity Zone, in City of Moreno Valley 2021b).

The Project site is within the service area of the Moreno Valley Fire Department (MVFD), which provides fire protection and emergency medical services for the City under contracts with the California Department of Forestry and Fire Protection and the Riverside County Fire Department as part of an integrated regional fire protection system. Through its partnership with California Department of Forestry and Fire Protection and Riverside County, MVFD has access to hazardous materials response teams, fire arson investigation, fire hand crews, bulldozers, aircraft, public information and education, dispatch center, and assistance from the Riverside County Fire Office of Emergency (MVFD 2023a).

The MVFD operates out of seven fire stations located throughout the city. Three MVFD stations are located in proximity to the Project site and could serve the Project site: Station 91 (approximately 0.8 miles from Project site), Station 99 (approximately 0.9 miles from the Project site), and Station 65 (approximately 1.5 miles from the Project site) (MVFD 2023b). Facilities are located strategically in an effort to maintain a 4-minute travel time (City of Moreno Valley 2021a).

MVFD also provides a full range of fire prevention services, including public education, code enforcement, plan check, and inspection services for new and existing construction, and fire investigation (see Section 4.15, Public Services and Recreation, of City of Moreno Valley 2021b). Through a master mutual aid agreement, MVFD is obligated to provide fire apparatus to other jurisdictions in the region to assist in handling emergency calls for service, just as those jurisdictions are obligated to provide resources to the City. Additionally, the City's Office of Emergency Management is located within the MVFD, allowing for a well-coordinated response to both natural and human-made disasters.

The Project proposes development that would require construction of Circulation Element and internal roadways, as well as improvements to existing intersections and construction of future intersections concurrent with development of each PA. All internal roadways would be built to meet all minimum fire apparatus access requirements of the Riverside County Fire Department and California Fire Code. Consistent with City's engineering standards, the Project's roadways would be required to meet all access requirements such as roadway widths, all-weather surface requirements, length of streets, turning requirements, grade restrictions, maintenance requirements, and parking restrictions. Specific fire and life safety requirements would be addressed at the building permit phase. Adequate emergency access and compliance with emergency access and design standards would be ensured through this permit review process by the City and responsible emergency service agencies throughout Project implementation.

As shown in Section 4.20, Wildfire, and Figure 4.20-4, Evacuation Routes, numerous potential evacuation routes are available in this urbanized area to connect the Project site with major transportation corridors. New roads constructed within the Project boundary would connect to John F Kennedy Drive, Cactus Avenue, Lasselle Street, Oliver Street, and Iris Avenue. The Project would provide five main points of ingress and egress and circulation on site that would connect existing roadways, which would provide additional opportunities for evacuation through the Project site for Project occupants and residents in the surrounding community. Regional access to/from the Project site is provided via I-215 and SR-60, located approximately 4.15 miles west and 1.85 miles north from the Project site, respectively. The City's Local Hazard Mitigation Plan (LHMP), adopted on October 4, 2011, and revised in 2017, contains a map of emergency evacuation routes in the community that includes I-215, SR-60, and major roadways to which the Project will connect (City of Moreno Valley 2022a).

Any Project construction activities that could potentially impact adjacent roadways, and thereby interfere with emergency access, would be subject to the City's Traffic Control Plan Guidelines & Checklist, including its Temporary Traffic Control Requirements (City of Moreno Valley 2022b). These requirements address applicable temporary traffic controls for all construction activities within the City public rights-of-way. This would include mandatory compliance with the latest California MUTCD and compliance with the requirement that emergency access to all nearby properties be maintained at all times. The Temporary Traffic Control Requirements also include requirements related to preparation of a custom Traffic Control Plan which addresses work on arterials, night-time/weekend, temporary changes to signal timing, work with any road closures, major encroachment, and major street improvements associated with commercial/residential developments. Compliance with the City's Temporary Traffic Control Requirements would ensure adequate emergency access is maintained throughout Project construction.

As shown in the Project's TA, the Project would be responsible for constructing half-width or full roadway improvements to the roadway system and intersections, when necessary, to ensure that the future dedication and acquisitions of roadways are appropriately timed and completed to adequately serve each PA, and will construct paved crossover points through medians as needed for emergency vehicle access. The City will maintain a current evacuation plan/Emergency Operations Plan (EOP), ensure that new development is provided with adequate emergency and/or secondary access, require visible street name signage, and provide directional signage to freeways at key intersections to assist in emergency evacuation operations. Additional discussion of emergency vehicle access, emergency response, and evacuation planning and routes and any required mitigation is provided in Section 4.9, Hazards and Hazardous Materials, and Section 4.20, Wildfire, of this SEIR. The Project would not result in inadequate emergency access and impact would be **less than significant**.

4.17.6 Significance of Impacts Before Mitigation

Threshold 1: Conflict with a Program, Plan, Ordinance, or Policy

Impacts would be **less than significant**.

Threshold 2: Conflict or Inconsistency with CEQA Guidelines Section 15064.3(b)

Impacts would be **less than significant**.

Threshold 3: Substantially Increase Hazards

Impacts would be **less than significant**.

Threshold 4: Inadequate Emergency Access

Impacts would be **less than significant**.

4.17.7 Mitigation Measures

4.17.7.1 Previously Adopted Mitigation Measures

The previously adopted mitigation measures correspond to a Future Year 2015. The recommended improvement included in the TA prepared for the Project correspond to a Horizon Year 2045. Per current analyses provided in the SEIR and in accordance with the current CEQA Guidelines, roadway and intersection improvements to address LOS impacts are not considered mitigation measures. On-site or frontage improvements, off-site improvements, and payment of DIF, TUMF or fair-share fees for cumulative effects would be implemented as conditions of approval or per the Project's Development Agreement. Therefore, previously adopted mitigation measures or intersection improvements have not been compared with the improvements proposed for the Project and would not be implemented with the Project to address the Project's transportation impact per current CEQA Guidelines.

4.17.7.2 Project Mitigation Measures for the 2024 Subsequent EIR

PDF-TRANS-1 through PDF-TRANS-12 will reduce the Project's trips and VMT. No mitigation measures are required.

4.17.8 Significance of Impacts after Mitigation

Threshold 1: Conflict with a Program, Plan, Ordinance, or Policy

The Project would have **less than significant** impacts related to conflicts with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Threshold 2: Conflict or Inconsistency with CEQA Guidelines Section 15064.3(b)

The Project would have **less than significant** impacts related to conflicts or inconsistencies with CEQA Guidelines Section 15064.3(b).

Threshold 3: Substantially Increase Hazards

The Project would have **less than significant** impacts related to substantially increased hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Threshold 4: Inadequate Emergency Access

The Project would have a **less than significant** impact associated with inadequate emergency access.

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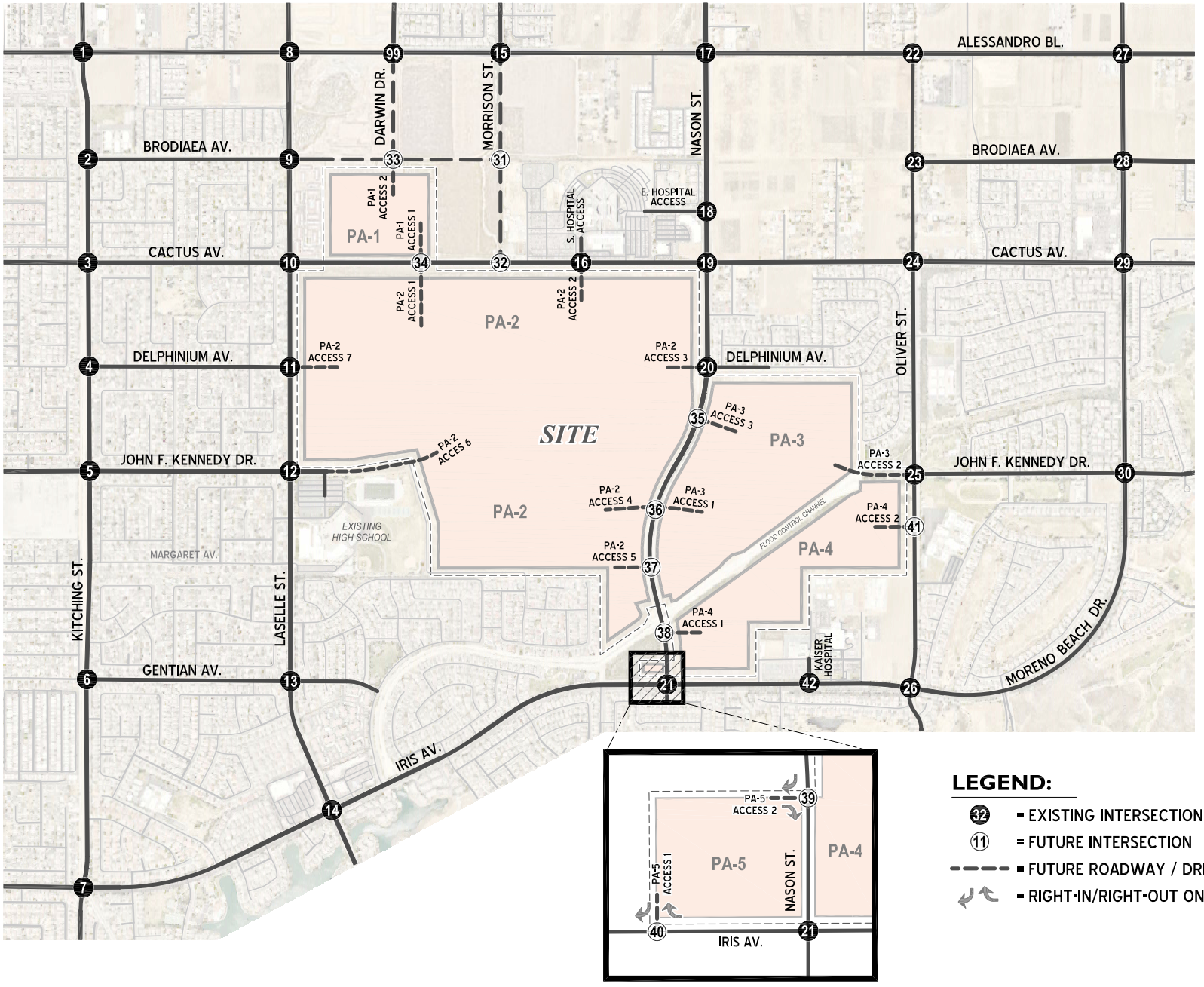

SOURCE: Aquabella Specific Plan Amendment, October 2023

FIGURE 4.17-1A

Focus Traffic Study Area and Access Locations

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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SOURCE: Aquabella Specific Plan Amendment, October 2023

FIGURE 4.17-1B

Extended Westerly Traffic Study Area

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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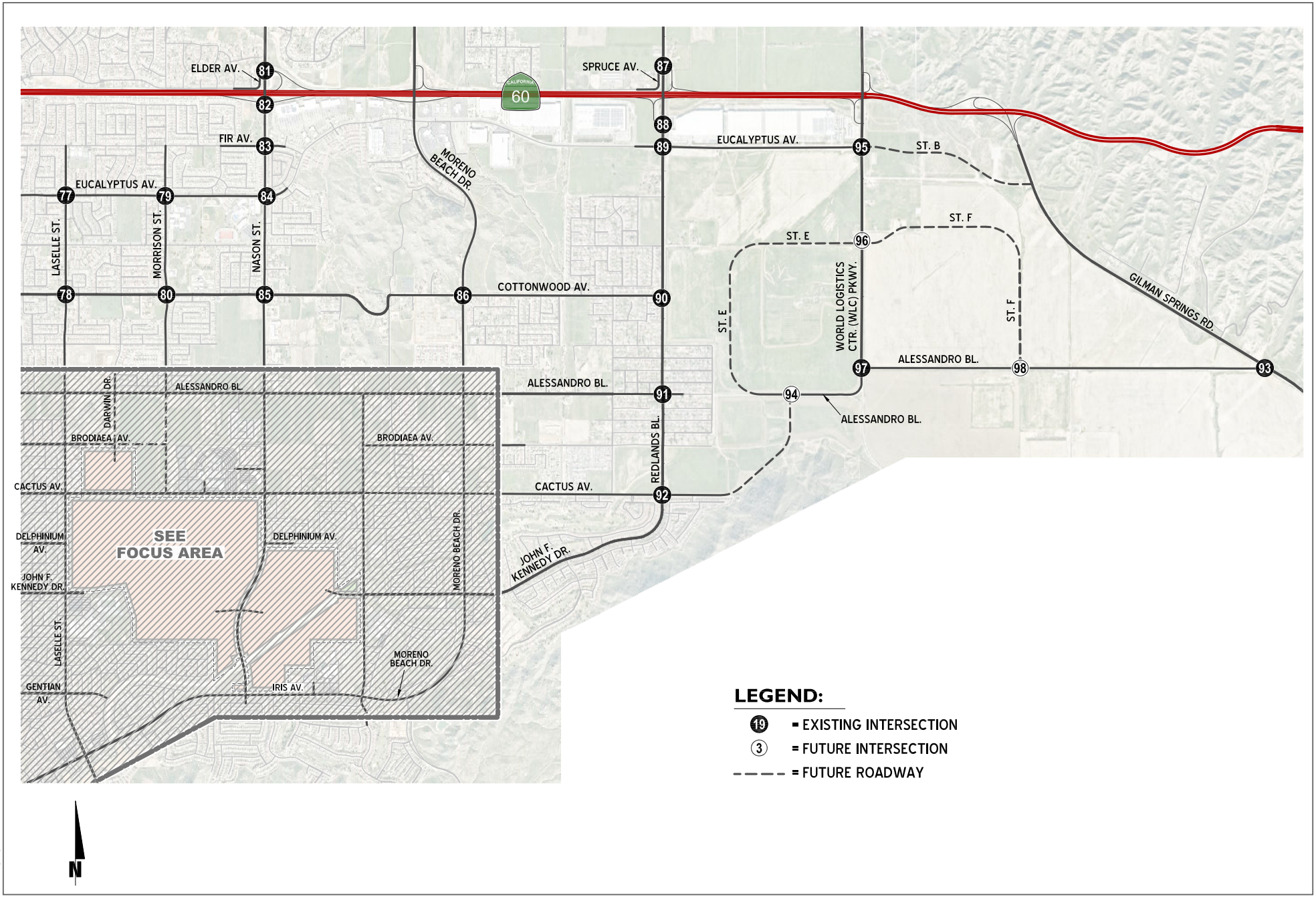

SOURCE: Aquabella Specific Plan Amendment, October 2023

FIGURE 4.17-1C

Extended Easterly Traffic Study Area

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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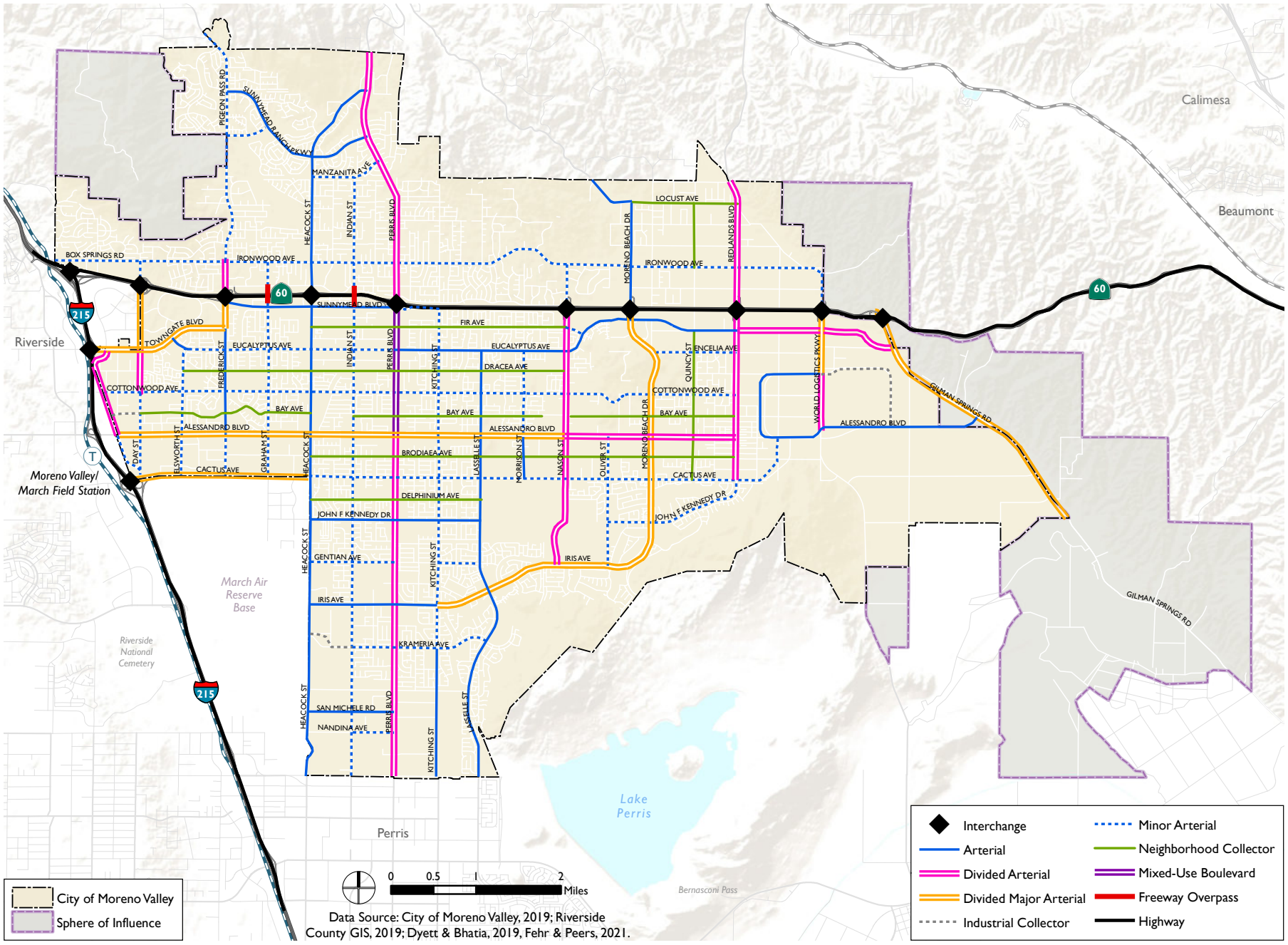

SOURCE: Aquabella Specific Plan Amendment, October 2023

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FIGURE 4.17-2

City of Moreno Valley General Plan Circulation Network

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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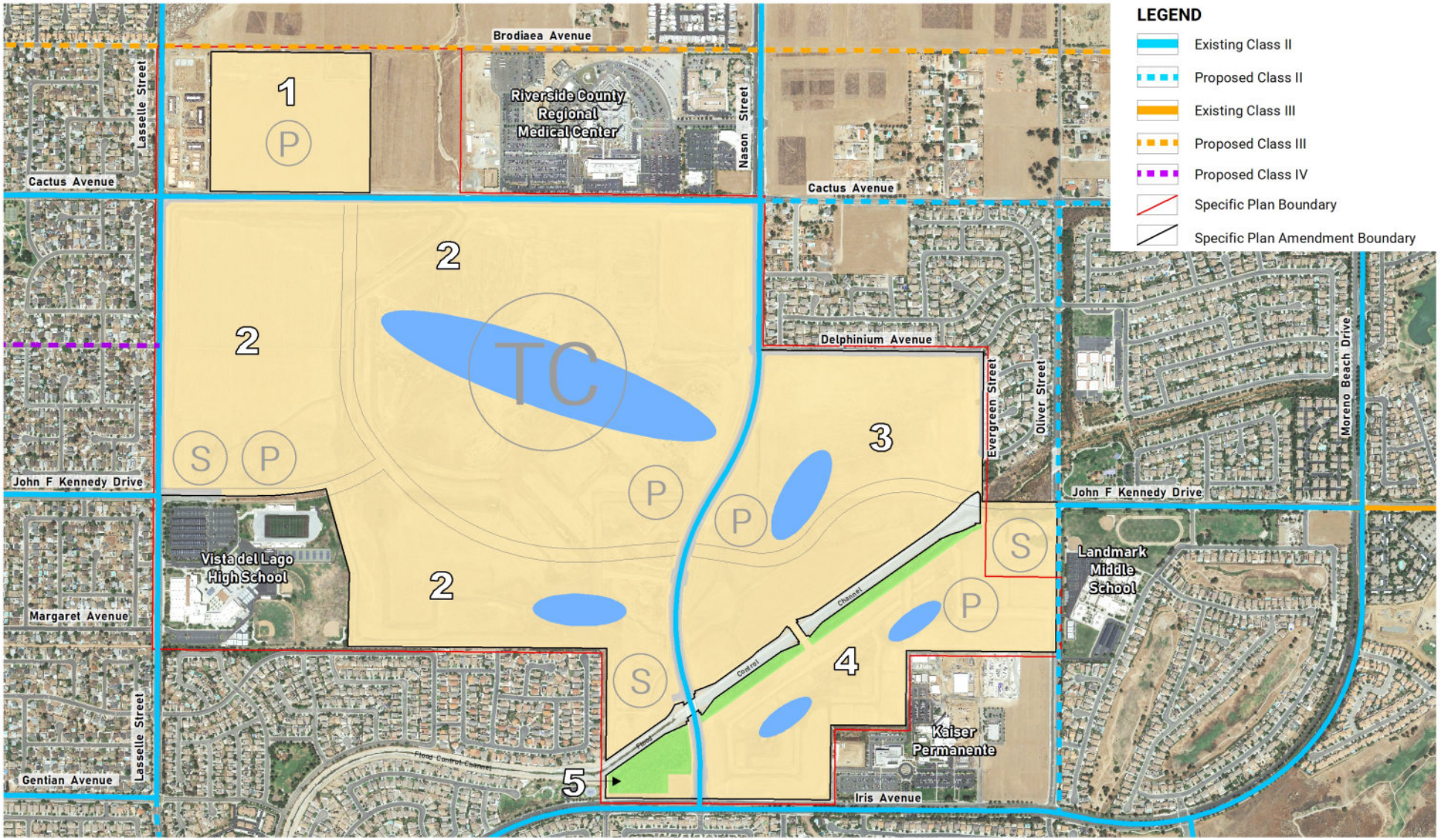

SOURCE: Aquabella Specific Plan Amendment, 2024

FIGURE 4.17-3

Conceptional Bicycle Circulation Master Plan

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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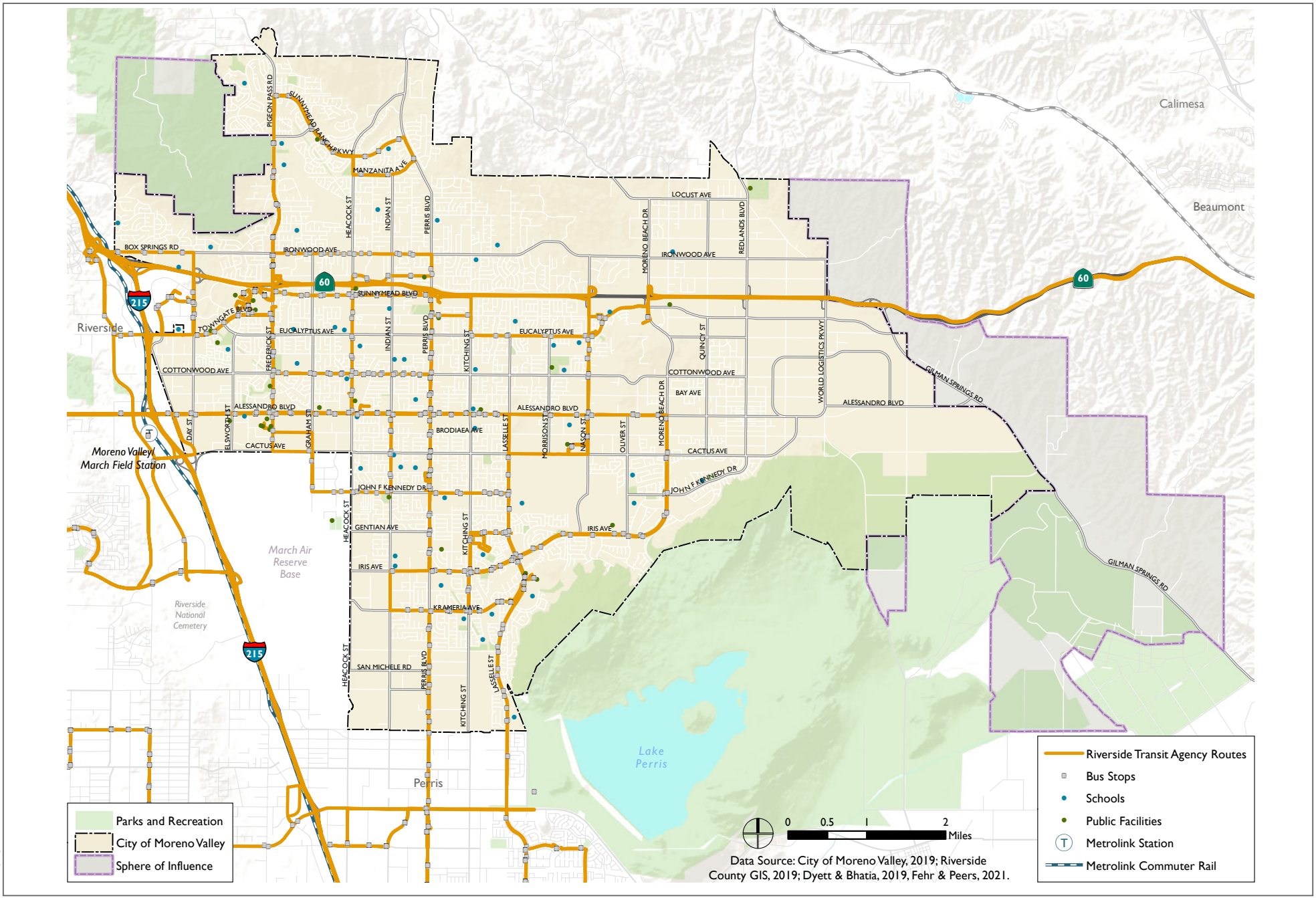

SOURCE: Aquabella Specific Plan Amendment, October 2023

FIGURE 4.17-4

Transit Lines and Facilities

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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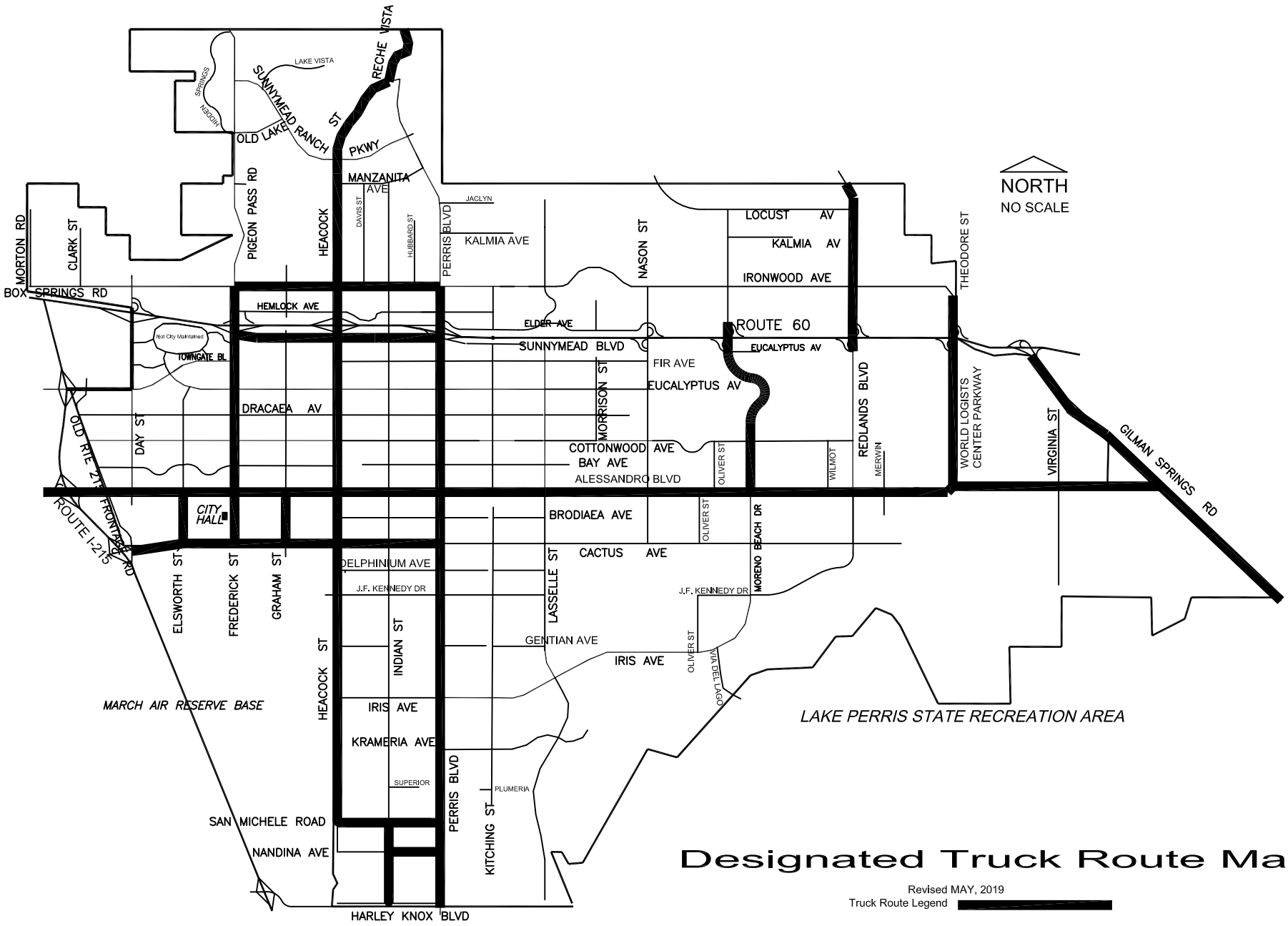

SOURCE: Aquabella Specific Plan Amendment, October 2023

FIGURE 4.17-5
Truck Routes
Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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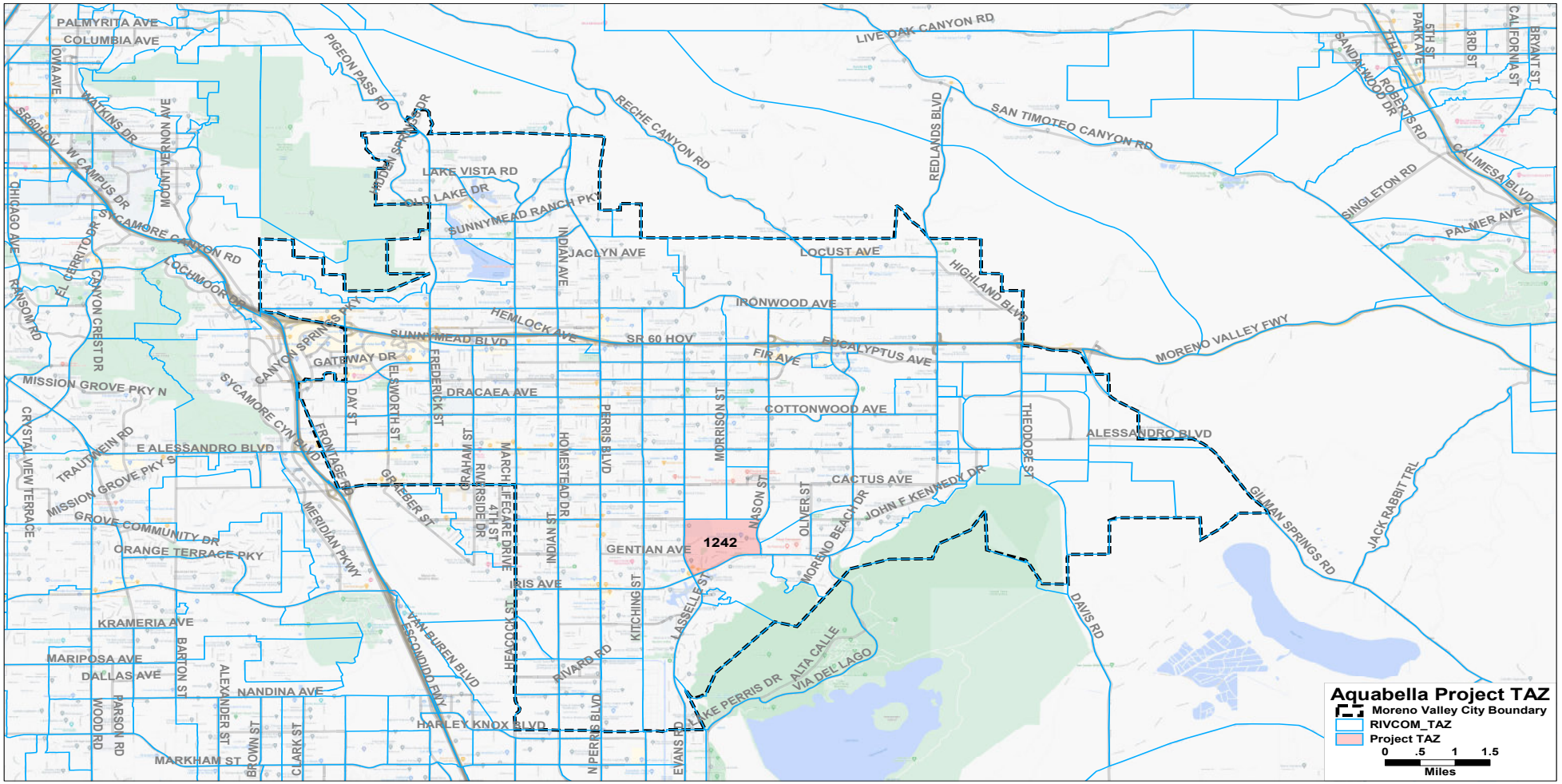

SOURCE: Aquabella Specific Plan Amendment, October 2023

FIGURE 4.17-6

Project's Traffic Analysis Zone

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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4.18 Tribal Cultural Resources

This section describes the existing tribal cultural resources (TCRs) conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project. The previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA), supported by the 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR) and the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), respectively, did not discuss impacts to TCRs but found the previously approved projects would result in less than significant impacts related to cultural resources, as no cultural resources were identified on the site (City of Moreno Valley 1999, 2005). The 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) did not discuss impacts to TCRs or cultural resources.

The information in this section is based on the Negative Cultural Resources Inventory Report for the Aquabella Specific Plan Update (Amendment 2) Project prepared by Dudek dated January 2024 (Appendix F) and the City of Moreno Valley General Plan 2040 (2040 General Plan)[1].

4.18.1 Existing Environmental Conditions

The following sections describe the archaeological background and history of the Project site and discuss known cultural resources and TCRs in or around the Project's area of potential effects (Project area). The Project area is the geographic area or areas in which an undertaking may directly or indirectly cause alterations in the character or use of cultural resources, if any exist, and here includes the Project site and off-site improvement areas (i.e., roadway, infrastructure/utilities).

Project Location and Setting

The Project area is located in the southeastern portion of the City of Moreno Valley (City), south of State Route 60 (Moreno Valley Freeway), east of Lasselle Street, north of Iris Avenue, and west of Oliver Street, in Riverside County, California. The Project area is bisected by Nason Street and is located at Sections 15, 16, 21, 22, and Range 3 West and Township 3 South in the U.S. Geological Survey 7.5-minute Series Sunnymead California Quadrangle. Specifically, the Project area consists of 668.6 acres located on Assessor's Parcel Numbers 486-300-013, 486-280-056 486-310-014, 486-320-012, 486-320-009, 486-300-012, 486-320-010, 486-320-013, 486-320-011, and 486-310-035, as well as rights-of-way. The Nason Street right-of-way is located within the ownership and is part of the Project area; however, the flood control channel was dedicated to the Riverside County Flood Control and Water Conservation District and is not located within the Project area.

The Project area is relatively flat and highly disturbed. The Project area has undergone substantial earth movement as the Project area was historically used for agricultural purposes and a majority of the Project area has been mass graded. Beginning in 1962, the site was been utilized by the University of California, Riverside, to grow experimental and commercial agricultural corps (City of Moreno Valley 1999). After the university sold the Project area in 1994, the California Department of Fish and Game (now the California Department of Fish and Wildlife), Regional Water Quality Control Board, and U.S. Army Corps of Engineers issued regulatory permits (Notification

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

No. 1600-2005-0146-R6 and Reference No. 200501583) for the 2005 Aquabella SPA in 2006 and the City issued a grading permit (Permit No. MV-0826, Project No. PM-33532) in 2007, which resulted in approximately 65% of the Project area being graded to a depth of between 5 and 10 feet.

California Historical Resources Information System Records Search and Survey

Assembly Bill (AB) 52 defines TCRs as those archaeological sites identified by tribal individuals that are eligible for or listed in the California Register of Historical Resources, or resources that are accompanied by substantial evidence such that the lead agency designates a resource as a TCR. As such, it is appropriate to review identification of prehistoric archaeological resources that have the potential to be identified by consulting tribes as a TCR, by referring to records searches and cultural resources inventories.

Dudek conducted a records search at the Eastern Information Center (EIC) for the Project area and a surrounding 1-mile radius on October 10, 2023. The EIC records search and previous archival research revealed that 46 previous cultural resources studies have been conducted within 1 mile of the Project area. Of the 46 previous studies, 3 studies intersect the Project area. These studies consist of an archaeological evaluation report, an archaeological survey for the original SP 218, and a Phase I archaeological assessment. Approximately 90% of the Project area has been previously studied. None of the previous cultural resource studies identified any resources within the Project area. The results of the records search are included in Confidential Appendix A of the cultural resources report (Appendix F of this Subsequent EIR) and summarized in Section 4.5, Cultural Resources.

The EIC records search did not identify any cultural resources within the Project area. The records search did identify 48 cultural resources within 1 mile of the Project area. Of the total 48 resources identified within 1 mile of the Project area, 39 are prehistoric sites (37 bedrock milling sites, 1 rock shelter with midden and bedrock milling, and 1 bedrock milling with a rock circle), and 9 are historic-period resources (1 cistern, residential foundation remains and refuse scatter, 1 well and pump, 2 roads, 3 single-family properties, and 1 historic-period isolate consisting of an irrigation pipe fragment).

Dudek archaeologists conducted a survey of the Project area on March 23, 2023, and March 24, 2023, using standard archaeological procedures and techniques that meet the Secretary of Interior's standards and guidelines for cultural resources inventory. Portions of the Project area show evidence of disking, plowing, cutting and filling for drainage, and pads throughout each parcel. Other disturbances include irrigation pipes, wells, and utilities, such as sewer pipes. Modern debris such as concrete piles were also observed within the Project area. No cultural resources were identified during the pedestrian survey.

Native American Coordination

Assembly Bill 52

A project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (California Public Resources Code [PRC] Section 21084.2). Under AB 52, a TCR must have tangible, geographically defined properties that can be impacted by project implementation. The Project is subject to compliance with AB 52.

The City sent notification of the Project to all California Native American tribal representatives that have requested project notifications from the City pursuant to AB 52 and that are on file with the Native American Heritage Commission (NAHC) as being traditionally or culturally affiliated with the geographic area on October 6, 2023. These

notification letters included a Project map and description inquiring if the tribe would like to consult to discuss the Project and the potential to impact any TCRs. AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it is assumed that consultation is declined. To date, six responses were received as a result of the City's AB 52 consultation notification efforts. Table 4.18-1 summarizes the results of the AB 52 process for the Project followed by a brief summary of the consultation results to date. The confidential AB 52 consultation results are on file with the City.

Table 4.18-1. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification, Date	Response to City Notification Letters	Consultation Date
Xitlaly Madrigal, Cultural Resources Analyst, Agua Caliente Band of Cahuilla Indians	Certified Mail, October 6, 2023	Email, October 19, 2023. Requested AB 52 consultation, copies of cultural resource documentation, and monitoring during ground disturbing activities.	Via Teams: October 19, 2023
Cheryl Madrigal, Tribal Historic Preservation Officer, Rincon Band of Luiseño Indians	Certified Mail, October 6, 2023	Email, October 26, 2023. Requested copies of the cultural resources report, geotechnical report, and grading plans; consultation will be dependent upon review.	N/A
Juan Ochoa, Assistant Tribal Historic Preservation Officer, Pechanga Cultural Resources Department	Certified Mail, October 6, 2023	Email, October 31, 2023. Requested AB 52 consultation and added to distribution lists for public notices and circulation of all documents pertaining to the Project.	Via Teams: March 22, 2024
Joseph Ontiveros, Tribal Historic Preservation Officer, Soboba Band of Luiseño Indians	Certified Mail, October 6, 2023	Email, November 3, 2023. Requested AB 52 consultation.	Via Teams: November 30, 2023
Bernadette Ann Brierty, Tribal Historic Preservation Officer, Morongo Band of Mission Indians	Certified Mail, October 6, 2023	Email, November 14, 2023. Requested AB 52 consultation; copies of the project design, grading maps, cultural resources documents, and geotechnical report; and tribal participation during survey and testing.	N/A
Eunice Ambriz, Cultural Resources Technician, San Manuel Band of Mission Indians	Certified Mail, October 6, 2023	Email, November 21, 2023. Did not request AB 52 consultation.	N/A

Note: N/A = not applicable.

On October 19, 2023, the Agua Caliente Band of Cahuilla Indians requested AB 52 consultation, copies of the Project's cultural resources documentation, and monitoring during ground disturbing activities. Also on October 19, 2023, a meeting was held via Teams between the City and the Agua Caliente Band of Cahuilla Indians. During the AB 52 consultation, the City's Planning Division staff noted that notification will be transmitted to the Agua Caliente Band of Cahuilla Indians for the initiation of the SB 18 consultation at a subsequent date. It was agreed that at that time both the AB 52 and SB 18 consultations will be conducted and completed.

On October 26, 2023, the Rincon Band of Luiseño Indians requested copies of the cultural resources report, geotechnical report, and grading plans and stated that the request for consultation will be dependent upon the review of the documents. As a follow-up to this correspondence, the City's Planning Division staff noted that notification will be transmitted to the Rincon Band of Luiseño Indians for the initiation of the SB 18 consultation at a subsequent date. It was agreed that at that time both the AB 52 and SB 18 consultations will be conducted and completed.

On October 31, 2023, the Pechanga Band of Indians requested consultation and to be added to the distribution lists for public notices and circulation of all documents pertaining to the Project. As a follow-up to this correspondence, the City's Planning Division staff noted that notification will be transmitted to the Pechanga Band of Indians for the initiation of the SB 18 consultation at a subsequent date. It was agreed that at that time both the AB 52 and SB 18 consultations will be conducted and completed.

On November 3, 2023, the Soboba Band of Luiseño Indians requested AB 52 consultation. On November 30, 2023, a meeting was held via Teams between the City and the Soboba Band of Luiseño Indians. The Soboba Band of Luiseño Indians reviewed the City's standard mitigation measures, agreed with the mitigation measures, and consultation under AB 52 was concluded. As a follow-up to this correspondence, the City's Planning Division staff noted that notification will be transmitted to the Soboba Band of Luiseño Indians for the initiation of the SB 18 consultation at a subsequent date. It was agreed that at that time SB 18 consultation will be conducted and completed.

On November 14, 2023, the Morongo Band of Mission Indians requested consultation; copies of the Project design, grading maps, cultural resources documents, and geotechnical report; and tribal participation during survey and testing. As a follow-up to this correspondence, the City's Planning Division staff noted that notification will be transmitted to the Morongo Band of Mission Indians for the initiation of the SB 18 consultation at a subsequent date. It was agreed that at that time both the AB 52 and SB 18 consultations will be conducted and completed.

On November 21, 2023, the San Manuel Band of Mission Indians did not request AB 52 consultation for the Project.

Senate Bill 18

According to Senate Bill (SB) 18, the City has a responsibility to initiate consultation with tribes/groups listed on the California NAHC's official SB 18 contact list for amendment of a General Plan. SB 18 requires the City to send a letter to each contact on the NAHC's SB 18 list, extending an invitation for consultation. Tribes will have 90 days from receipt of the letter to request consultation. The City must also send a notice to all contacts 45 days prior to adopting the amended General Plan, as well as a third notice 10 days prior to any public hearing regarding the General Plan amendment.

The City received a list of tribes from the NAHC on November 30, 2023**.** The City sent notification of the Project to all California Native American tribal representatives that have requested notifications pursuant to SB 18 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area on

December 19, 2023. These notification letters included a Project map and description inquiring if the tribe would like to consult on the Project. To date, government-to-government consultation initiated by the City has not resulted in the identification of a TCR within or near the Project site. Table 4.18-2 summarizes the results of the SB 18 process for the Project so far. The confidential SB 18 consultation results are on file with the City.

Table 4.18-2. Senate Bill 18 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification/Date	Response to City Notification Letters	Consultation Date
Patricia Garcia, Director of Historic Preservation, Agua Caliente Band of Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending
Tribal Operations, Augustine Band of Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending
Doug Welmas, Chairperson, Cabazon Band of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
BobbyRay Esaprza, Cultural Director, Cahuilla Band of Indians	Certified Mail, December 19, 2023	Pending	Pending
Daniel Salgado, Chairperson, Cahuilla Band of Indians	Certified Mail, December 19, 2023	Pending	Pending
Anthony Madrigal, Tribal Historic Preservation Officer, Cahuilla Band of Indians	Certified Mail, December 19, 2023	Pending	Pending
Ralph Goff, Chairperson, Campo Band of Diegueno Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Michael Garcia, Vice Chairperson, Ewiiaapaayp Band of Kumeyaay Indians	Certified Mail, December 19, 2023	Pending	Pending
Robert Pinto, Chairperson, Ewiiaapaayp Band of Kumeyaay Indians	Certified Mail, December 19, 2023	Pending	Pending
Gwendolyn Parada, Chairperson, La Posta Band of Diegueno Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Ray Chapparosa, Chairperson, Los Coyotes Band of Cahuilla and Cupeño Indians	Certified Mail, December 19, 2023	Pending	Pending
Angela Elliott Santos, Chairperson, Manzanita Band of Kumeyaay Nation	Certified Mail, December 19, 2023	Pending	Pending
Michael Linton, Chairperson, Mesa Grande Band of Diegueno Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Ann Brierty, Tribal Historic Preservation Officer, Morongo Band of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Robert Martin, Chairperson, Morongo Band of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending

Table 4.18-2. Senate Bill 18 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification/Date	Response to City Notification Letters	Consultation Date
Christopher Nejo, Legal Analyst/Researcher, Pala Band of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Alexis Wallick, Assistant Tribal Historic Preservation Officer, Pala Band of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Shasta Gaughen, Tribal Historic Preservation Officer, Pala Band of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Steve Bodmer, General Counsel for Pechanga Band of Indians, Pechanga Band of Indians	Certified Mail, December 19, 2023	Pending	Pending
Tuba Ebru Ozdil, Pechanga Cultural Analyst, Pechanga Band of Indians	Certified Mail, December 19, 2023	Email/letter, January 17, 2024, requesting SB 18 consultation and all documents pertaining to the Project	Consultation conducted on March 22, 2024 via Teams.
Jill McCormick, Historic Preservation Officer, Quechan Tribe of the Fort Yuma Reservation	Certified Mail, December 19, 2023	Pending	Pending
Manfred Scott, Acting Chairman - Kw'ts'an Cultural Committee, Quechan Tribe of the Fort Yuma Reservation	Certified Mail, December 19, 2023	Pending	Pending
Jordan Joaquin, President, Quechan Tribal Council, Quechan Tribe of the Fort Yuma Reservation	Certified Mail, December 19, 2023	Pending	Pending
Joseph Hamilton, Chairperson, Ramona Band of Cahuilla	Certified Mail, December 19, 2023	Pending	Pending
Denise Turner Walsh, Attorney General, Rincon Band of Luiseño Indians	Certified Mail, December 19, 2023	Email/letter, December 20, 2023. Deferring their tribal consultation to Soboba Band of Luiseño Indians	Deferred to Soboba Band of Luiseño Indians
Joseph Linton, Tribal Council/Culture Committee Member, Rincon Band of Luiseño Indians	Certified Mail, December 19, 2023	Email/letter, December 20, 2023. Deferring their tribal consultation to Soboba Band of Luiseño Indians	Deferred to Soboba Band of Luiseño Indians

Table 4.18-2. Senate Bill 18 Native American Tribal Outreach Results

Native American Tribal Representatives	Method of Notification/Date	Response to City Notification Letters	Consultation Date
Laurie Gonzalez, Tribal Council/Culture Committee Member, Rincon Band of Luiseño Indians	Certified Mail, December 19, 2023	Email/letter, December 20, 2023. Deferring their tribal consultation to Soboba Band of Luiseño Indians	Deferred to Soboba Band of Luiseño Indians
Cultural Resources Manager/Tribal Historic Preservation Officer, Rincon Band of Luiseño Indians	Certified Mail, December 19, 2023	Email/letter, December 20, 2023. Deferring their tribal consultation to Soboba Band of Luiseño Indians	Deferred to Soboba Band of Luiseño Indians
Alexandra McCleary, Cultural Lands Manager, San Manuel Band of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Lovina Redner, Tribal Chair, Santa Rosa Band of Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending
Wayne Walker, Co-Chairperson, Serrano Nation of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Mark Cochrane, Co-Chairperson, Serrano Nation of Mission Indians	Certified Mail, December 19, 2023	Pending	Pending
Joseph Ontiveros, Tribal Historic Preservation Officer, Soboba Band of Luiseño Indians	Certified Mail, December 19, 2023	Email, January 4, 2024. Requesting to conclude tribal consultation	N/A
Jessica Valdez, Cultural Resource Specialist, Soboba Band of Luiseño Indians	Certified Mail, December 19, 2023	Email, January 4, 2024. Requesting to conclude tribal consultation	N/A
Abraham Becerra, Cultural Coordinator, Torres-Martinez Desert Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending
Mary Belardo, Cultural Committee Vice Chair, Torres-Martinez Desert Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending
Alesia Reed, Cultural Committee Chairwoman, Torres-Martinez Desert Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending
Thomas Tortez, Chairperson, Torres-Martinez Desert Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending
Gary Resvaloso, TM MLD, Torres-Martinez Desert Cahuilla Indians	Certified Mail, December 19, 2023	Pending	Pending

On January 17, 2024, the Pechanga Band of Indians requested SB 18 consultation and all documents pertaining to the Project. On March 22, 2024, the City's Planning Division staff conducted consultation with the Pechanga Band of Indians virtually via Microsoft Teams. Pechanga Band of Indians indicated that there are known cultural resources north of the Project site and requested they are referenced in the reports and maps. Pechanga Band of Indians asked for information related to water reports, specifically regarding drainage at the western portion of the site west of Mason Street. Pechanga Band of Indians requested copies of the land use plans and site plan. Pechanga Band of Indians provided language revisions to the City's mitigation measures which were incorporated into the SEIR. Consultation was concluded May 28, 2024.

On December 20, 2023, the Rincon Band of Luiseño Indians deferred their tribal consultation to the Soboba Band of Luiseño Indians. Since that time, the City's Planning Division staff has continued correspondence for the scheduling of the SB 18 consultation.

On January 4, 2024, the Soboba Band of Luiseño Indians requested to conclude consultation under AB 52 and SB 18 after reviewing the City's standard mitigation measures and agreeing with the mitigation measures.

4.18.2 Regulatory Framework

Please refer to Section 4.5 for the regulatory framework.

4.18.3 Significance Criteria

The significance criteria used to evaluate the Project impacts to tribal cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to tribal cultural resources would occur if the Project would:

1. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
    i. Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
    ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American.

4.18.4 Impact Analysis

4.18.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR did not discuss impacts to TCRs as AB 52 went into effect on July 1, 2015; therefore, AB 52 was not in effect at the time of EIR preparation.

Mitigation

No mitigation was identified.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR did not discuss impacts to TCRs as AB 52 went into effect on July 1, 2015; therefore, AB52 was not in effect at the time of the Supplemental EIR preparation.

Mitigation

No mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum did not discuss impacts to TCRs as AB 52 went into effect on July 1, 2015; therefore, AB52 was not in effect at the time of the Addendum preparation.

Mitigation

No mitigation was identified.

4.18.4.2 Project Impact Analysis

Threshold 1: ***Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:***

> ***(i) listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or***
>
> ***(ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American?***

As discussed in Section 4.5 and Appendix F and described above, the Eastern Information Center records search results did not identify any previously recorded cultural resources within the Project area, the NAHC Sacred Lands File search results were negative, the pedestrian survey did not result in the identification of archaeological or cultural resources in the Project area, and archival research and a review of aerial photographs reveal that the Project area has been disturbed by past agricultural activities and grading activities.

Under AB 52, TCRs are defined as archaeological resources that are eligible for or listed in the CRHR. The City reached out to six tribes for the Project via certified mail on October 6, 2023, for AB 52 consultations:

- Agua Caliente Band of Cahuilla Indians
- Morongo Band of Mission Indians
- Pechanga Cultural Resources Department
- Rincon of Luiseño Indians
- San Manuel Band of Mission Indians
- Soboba Band of Luiseño Indians

Responses were received from all six tribes, as outlined in Table 4.18-1. The Agua Caliente Band of Cahuilla Indians requested monitoring during ground disturbing activities, the Soboba Band of Luiseño Indians agreed with the City's standard mitigation measures, the San Manuel Band of Mission Indians did not request AB 52 consultation for the Project, The City is in active consultation with the Rincon Band of Luiseño Indians, the Pechanga Band of Indians, and Morongo Band of Mission Indians.

According to SB 18, the City must consult with California Native American tribes for the purpose of preserving specified places, features, and objects located within the City's jurisdiction. To comply with this, the City contacted the SB 18 list provided by the NAHC, shown in Table 4.18-2. The City continues to conduct ongoing consultation with the Pechanga Band of Indians. The Rincon Band of Luiseño Indians deferred their tribal consultation to the Soboba Band of Luiseño Indians. The

Soboba Band of Luiseño Indians requested to conclude consultation under AB 52 and SB 18 after reviewing and agreeing with the City's mitigation measures.

To date, no TCRs have been identified that would be impacted by Project implementation. However, tribal consultation with the City is ongoing, and this EIR will be updated upon conclusion of tribal consultation.

The discovery of buried TCRs poses a potential significant impact to TCRs. However, as discussed in Section 4.5, there is an extremely low potential to encounter previously unidentified subsurface cultural/archaeological deposits or human remains in light of substantial prior site disturbance associated with prior agricultural use and grading under prior approvals. Further, implementation of **Mitigation Measure (MM) CUL-1** through **MM-CUL-9** would ensure proper treatment of unknown TCRs and ensure such potential impacts would remain **less than significant with mitigation**.

4.18.5 Significance of Impacts Before Mitigation

Threshold 1: Substantial Adverse Change

The Project would result in **potentially significant impacts** to TCRs.

4.18.6 Mitigation Measures

4.18.6.1 Previously Adopted Mitigation Measures

1999 EIR

The 1999 EIR did not identify significant impacts related to TCRs as AB 52 went into effect on July 1, 2015; therefore, no mitigation was required.

2003 Supplemental EIR

No mitigation was required.

2005 Addendum

The 2005 Addendum did not identify significant impacts related to TCRs as AB 52 went into effect on July 1, 2015; therefore, no mitigation was required.

4.18.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

MM-CUL-1 through **MM-CUL-9** would be required to ensure proper treatment of TCRs should they be encountered in the Project area. Refer to Section 4.5.

4.18.7 Significance of Impacts after Mitigation

Threshold 1: Substantial Adverse Change

MM-CUL-1 through **MM-CUL-9** would ensure proper treatment should unknown TCRs be discovered. With **MM-CUL-1** through **MM-CUL-9,** impacts would be **less than significant with mitigation**.

4.19 Utilities and Service Systems

This section describes the existing utility and service systems conditions of the Project site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the Aquabella Specific Plan Amendment Project (Project) compared to the previously approved Moreno Valley Field Station Specific Plan 218 (original SP 218) and 2005 Aquabella Specific Plan Amendment (2005 Aquabella SPA) (City of Moreno Valley 1999a, 2005a). The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), as modified by the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR) and 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum), found that the previously approved projects would result in less than significant impacts related to utilities and service systems (City of Moreno Valley 1999b, 2003, 2005b).

This section is based on data and information contained in the Water Supply Assessment Report for the Aquabella Specific Plan Update (WSA) prepared by Eastern Municipal Water District (EMWD) in October 2023 (Appendix L), the City of Moreno Valley General Plan 2040 (2040 General Plan)[1],, and other public records and documents.

4.19.1 Existing Environmental Conditions

This section provides background information about the water, wastewater, and solid waste service providers that currently serve the Project area and that would serve the Project. Please also see Section 4.10, Hydrology and Water Quality, for a discussion of stormwater and groundwater facilities and conditions.

Project Site

The Project site is composed of 668.6 acres of relatively flat land located in an infill area of the City of Moreno Valley (City). Approximately 446 acres (65%) of the Project site have been graded. Stormwater runoff occurs primarily as sheet flow to the south. Three agricultural wells on site were previously used for irrigation: Filaree, Scott, and Coray. The Filaree well has since been abandoned. Two new deep groundwater wells were completed adjacent to Nason Street on the Project site in 2007 pursuant to the prior approvals for the 2005 Aquabella SPA. Well No. 1 provides for pumping at a rate of 1,500 gallons per minute and Well No. 2 at a rate of 450 gallons per minute. Consistent with the prior approvals, these two wells are proposed to remain in production to supply approximately 200-acre feet (AF) annually to the Project's lakes.

Water

The Project is in the water service boundary of the Eastern Municipal Water District (EMWD). EMWD provides potable water, recycled water and wastewater services for seven cities and unincorporated areas of Riverside County, including the City. EMWD's retail water supply portfolio averages approximately 49% imported water from the Metropolitan Water District of Southern California (MWD), 10% groundwater, 6% desalinated brackish groundwater, and 35% recycled water (EMWD 2023a).

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

The water sources MWD draws on to supply EMWD and other member agencies with water include water from the State Water Project (SWP) and Colorado River pursuant to apportionment agreements that have been designed to address ecological and sustainability needs, as well as local groundwater, surface water, recycled water, desalinated water, and local imports (MWD 2021). MWD's 2020 Urban Water Management Plan (UWMP) and 2015 Integrated Water Resources Plan discuss the availability of these existing supplies and comprehensive planning for long-term water reliability, including key supply development and water use efficiency goals (MWD 2016 2021). MWD's UWMP explains that MWD "has supply capabilities sufficient to meet expected demands from 2025 through 2045 under a single dry-year condition and a period of drought lasting five consecutive water years, … as well as in a normal water year hydrologic condition" (MWD 2021). MWD's UWMP takes into account the impacts of global climate change on its water supply, using hydraulic studies to predict the impacts on its water supplies, and incorporates steps to offset the effects of climate change on water supply, including drought response actions. MWD also considers potential uncertainties and supply constraints, such as supplies available from the SWP and Colorado River. MWD has reduced its use of the Colorado River over the past 20 years and has a goal to reduce imports from the Colorado River and SWP sources to 36% of its total supply (MWD 2021.

Considering and planning for these challenges, MWD's UWMP provides, "Metropolitan has plans for supply implementation and continued development of a diversified resource portfolio including programs in the Colorado River, SWP, Central Valley storage and transfers programs, local resource projects, and in-region storage that enables the region to meet its water supply needs" (MWD 2021). Further, MWD "actively supports improved watershed protection programs for its source waters in the Colorado River and State Water Project" (MWD 2021) to ensure water supply reliability and improve water quality standards. To continue to address water supply challenges, MWD takes a variety of actions to maintain water reliability in its service area, including the following:

- Continuing water conservation by expanding outreach, adding devices, and increasing incentives to residents
- Increasing local resources by providing incentives for on-site recycled water hook-up and the Local Resources Program
- Augmenting water supplies through water transfers and exchanges
- Improving return capability of storage programs to effectively take delivery of water when needed
- Maintaining dry year and emergency storage for the region to remain reliable during periods of low supply and emergencies
- Modifying MWD's distribution system to enhance operational flexibility and efficient delivery of Colorado River, SWP, and in-region supplies within the MWD service area
- Implementing shortage response actions under the Water Shortage Contingency Plan and elements of the Water Surplus and Drought Management Plan and Water Supply Allocation Plan to distribute the limited imported supplies and preserve storage reserves
- Responding to water quality concerns by protecting the quality of the source water, developing water management programs that maintain and enhance water quality, and changing water treatment protocols or blending

In addition to the water supplied to EMWD by MWD, EMWD's supplies include groundwater, desalinated brackish groundwater, and recycled water. EMWD's 2020 UWMP addresses water supply, demand, and reliability within its service boundary (EMWD 2020). The EMWD supplies water to residential uses, commercial uses, and other water agencies. EWMD provides water and/or wastewater services to the following water agencies: City of Hemet Water Department, City of Perris Water System, City of San Jacinto Water Department, Lake Hemet Municipal Water District, Murrieta Division of Western Municipal Water District, Nuevo Water Company, and Rancho California Water

District. As described in EMWD's UWMP, the planned population within the EMWD boundary is expected to increase by 210,000 people by 2045. EMWD's UWMP projections for population growth, projected water demand, and water supply are shown below in Table 4.19-1. As determined by the EMWD and described in its UWMP, the projected water supplies would be sufficient to meet the projected water demand within the EMWD for normal, single-dry, and multiple-dry years through the year 2045. Recycled water supply decreases demand on potable water services within the EMWD service area. Recycled water within the EMWD service area is used for agricultural irrigation, landscaping irrigation, and recreational ponds.

Table 4.19-1. Projected Population, Water Demand (Potable and Raw) and Water Supply, Normal Year

	2025	2030	2035	2040	2045
Population, within EMWD Boundary	921,200	983,300	1,045,300	1,088,300	1,131,300
Projected Water Demand, Potable and Raw (AFY)	102,600	108,300	114,400	118,900	123,000
Recycled Water Supply, Reasonably Available Volume, (AFY)	43,330	49,020	54,500	59,800	64,100
Total Water Supply, Reasonably Available Volume, (AFY)	145,930	157,320	168,900	178,700	187,100

Source: EMWD 2020.
Notes: AFY = acre-feet per year.
"Raw" water is water that has yet to be treated to make it potable.

Table 4.19-2 (single-dry year) and Table 4.19-3 (multiple-dry years) demonstrate that EMWD will have sufficient supplies to meet demands from 2025 to 2045 under single-dry and multiple-dry year conditions. The single-dry year represents the year with the lowest water supply available to the agency. The multiple-dry year period represents the lowest average water supply availability to the agency for a consecutive 5-year period. The "Difference" lines in both tables show "0" to reflect that in dry years, EMWD's developed programs accommodate increases in demand; one such program is EMWD's planned Enhanced Recharge and Recovery Program, which is a conjunctive water use and groundwater banking program. Such programs allow EMWD to rely more heavily on (1) groundwater supplies to meet demand increases in dry years, (2) water conservation measures, and (3) the import of additional supplies from MWD to meet increases in demand. Thus, EMWD's diverse water supplies and programs can and will match the increases in demand in single-dry and multiple-dry years, as shown below.

Table 4.19-2. EMWD Retail Water Demand and Water Supply, Single-Dry Year

	2025	2030	2035	2040	2045
Projected Water Demand (AFY)	151,130	162,820	174,700	184,700	193,300
Projected Water Supply (AFY)	151,130	162,820	174,700	184,700	193,300
Difference	0	0	0	0	0

Source: EMWD 2023.
Note: AFY = acre-feet per year.

Table 4.19-3. EMWD Retail Water Demand and Water Supply, Multiple-Dry Year

Year		2025	2030	2035	2040	2045
First Year	Projected Water Demand (AFY)	151,130	162,820	174,700	184,700	193,300
	Projected Water Supply (AFY)	151,130	162,820	174,700	184,700	193,300
	Difference	0	0	0	0	0
Second Year	Projected Water Demand (AFY)	132,700	143,300	153,700	162,500	170,300
	Projected Water Supply (AFY)	132,700	143,300	153,700	162,500	170,300
	Difference	0	0	0	0	0
Third Year	Projected Water Demand (AFY)	134,900	145,500	155,500	164,100	171,900
	Projected Water Supply (AFY)	134,900	145,500	155,500	164,100	171,900
	Difference	0	0	0	0	0
Fourth Year	Projected Water Demand (AFY)	137,100	147,600	157,400	165,700	173,500
	Projected Water Supply (AFY)	137,100	147,600	157,400	165,700	173,500
	Difference	0	0	0	0	0
Fifth Year	Projected Water Demand (AFY)	140,200	150,800	160,000	168,000	175,800
	Projected Water Supply (AFY)	140,200	150,800	160,000	168,000	175,800
	Difference	0	0	0	0	0

Source: EMWD 2023.
Note: AFY = acre-feet per year.

On-Site Infrastructure

Potable water lines currently border and traverse the Project site, including parallel 12- and 24-inch lines in Cactus Avenue, parallel 12- and 24-inch lines on Lasselle Street, a 24-inch line in Nason Street, an 18-inch pipe on Iris Avenue, an existing 12-inch line in Oliver Street from Delphinium Avenue to John F. Kennedy Drive, and a 12-inch line from Filaree Avenue to Iris Avenue.

There is an existing 12-inch recycled water main in Cactus Avenue that links to a 12-inch line along Nason street where the 12-inch line meets the 24-inch pipe on Iris Avenue. Oliver Street has a gap between John F. Kennedy Drive and Filaree Avenue, with an 8-inch line from John F. Kennedy Drive to the north and a 12-inch line from Filaree Avenue to Iris Avenue. Section 4.19.4.2 describes the Project's proposed connections to these existing facilities.

Groundwater

Supply

The Project site is located over the San Jacinto Groundwater Basin. The Department Water Resources (DWR), considers the San Jacinto Groundwater Basin a high priority basin in accordance with the Sustainable Groundwater Management Act (GMA), but not critically overdrafted (DWR 2023). As a high-priority basin, the GMA requires development of a groundwater sustainability plans (GSPs) and basin management for long-term sustainability. Here, the San Jacinto Basin GSP indicates that groundwater water levels have increased in the Moreno Valley area since the 1970s despite prolonged periods of drought. The West San Jacinto Groundwater Management Area 2020 Annual Report shows continuing groundwater improvements in quality and quantity in the Project area over the prior 5 years (EMWD 2021a). As discussed in Section 4.10, Hydrology and Water Quality, during a recent well evaluation in 2023, groundwater levels were reported at 72 feet below ground surface in Aquabella Well No. 1 and 86 feet below ground surface in Aquabella Well No. 2. (Wallace Group 2023). As discussed in Section 4.7, Geology and Soils, geotechnical explorations identified shallow groundwater at a depth between 30 and 50 feet below ground surface, indicating shallow perched groundwater may be present at the Project site.

Quality

As discussed in Section 4.10, historically, groundwater in the San Jacinto Groundwater Basin has been of sufficient quality for domestic, irrigation, and industrial purposes; however, groundwater quality has been adversely affected by both natural and anthropogenic (human-caused) activities. The natural conditions that impact water quality include the location of the basin in a semi-arid environment and lack of groundwater interchange with adjacent basins, both of which contribute to areas of naturally brackish groundwater in the Project site, and groundwater flow along the San Jacinto Fault Zone (including the Casa Loma Fault), which moves boron and fluoride from deeper formations into the water bearing strata in the basin and can cause locally elevated groundwater temperatures (EMWD 2021f). Anthropogenic activities have exacerbated naturally occurring water quality issues and introduced additional contaminants through release of pollutants from both point (i.e., single point of discharge) and non-point sources (i.e., diffuse discharges) from agricultural uses. Further, the quality of the groundwater basin has also been affected by use of imported surface water from both the Sacramento-San Joaquin Delta and the Colorado River. Water originating from the Colorado River typically contains high total dissolved solids and low levels of nutrients, whereas water originating from the SWP has low total dissolved solids and higher concentrations of nutrients. During droughts, an increased percentage of water delivered to the Plan Area is from the Colorado River and the water delivered by the SWP becomes increasingly saline.

As discussed in Section 4.9, Hazards and Hazardous Materials, in groundwater, concentrations of 1,1-dichloroethane, 1,1-DCE, cis-1,2-DCE, ethylbenzene, PCE, TCE, and vinyl chloride detected during the 2001 Phase II ESA were above established environmental screening levels, either for drinking water standards or potential residential vapor intrusion. Groundwater quality at the site was evaluated in 2008 and then more recently in 2023. In 2008, analytical results indicated high pH in deeper zones, high total dissolved solids in shallow zones, and high vanadium in Aquabella No. 2, all of which were above regulatory drinking water standards (California Department of Public Health secondary Maximum Contaminant Levels and notification level for unregulated chemicals) (RBF Consulting 2008a, 2008b). The sampling of the two wells (Aquabella Well No. 1 and 2) in 2023 indicated that total coliform bacteria were present in each well, nitrate levels were relatively close to—but below—the maximum contaminant level for drinking water (10 millligrams per liter [mg/L]) at concentrations of 7.6 and 9.8 mg/L, and perchlorate concentrations were found at concentrations of 0.007 and 0.004 mg/L, compared to a maximum contaminant level of 0.006 mg/L (Wallace Group 2023) (see Table 4.9-1 in Section 4.9).

Drinking water to the Project would be provided by EMWD, not from well-water on site. However, as discussed in Section 3.3.2, Description of the Specific Plan Amendment, the 40-acre planned lake system would be initially filled and maintained using tertiary-treated water and/or existing on-site water supply wells (Aquabella No. 1 and Aquabella No. 2). The lake would be used in the future for stormwater management and irrigation, and water levels would be maintained using the groundwater supply wells.

Wastewater

EMWD manages wastewater collection, treatment, and infrastructure within western Riverside County, including the City and the Project site. EMWD treats approximately 49 million gallons per day (mgd) of wastewater and services approximately 268,000 customers within its service area. EMWD has four active regional water reclamation facilities through 1,813 miles of pipelines (EMWD 2023b). The closest EMWD water reclamation facility to the Project site is the Moreno Valley Facility. As shown in Table 4.19-4, the Moreno Valley Facility currently utilizes 72% of the current capacity and 63.9% of the ultimate capacity. The Moreno Valley Facility also has the ability to divert 2 mgd to the Perris Valley Facility, which has additional capacity. EMWD is currently utilizing only 64% of the current capacity of all water reclamation facilities.

Table 4.19-4. EMWD Water Reclamation Facility Capacity

Facility	Typical Daily Flow (mgd)	Current Capacity (mgd)	Ultimate Capacity (mgd)	Remaining Percent (%) of Current Capacity	Remaining Percent (%) of Ultimate Capacity
San Jacinto Valley	7	14	27	50%	74.1%
Moreno Valley	11.5	16	18	28%	36.1%
Perris Valley	15.5	22	100	84.5.%	78%
Sun City*	N/A	3	21	N/A	N/A
Temecula Valley	14	23	28	39.2%	50%
Total**	**49**	**75**	**173**	**36%**	**72.3%**

Source: EMWD 2021b, 2021c, 2021d, 2021e, 2023c.
* Sun City Water Reclamation Facility Capacity is not currently active
** Total flow and Capacity of Active Reclamation Facility Capacity

Sewer trunk lines surrounding the Project site include a 12-inch line in Cactus Avenue, a 15-inch line in Oliver Street, and a 21-inch to a 24-inch line in Nason Street connecting to a 33-inch line in Iris Avenue. Existing crossings of one 8-inch and one 12-inch line under Line F channel have been installed. There is an existing 33-inch line that cuts through the Project site connecting the wastewater flows from John F. Kennedy Drive and Kaiser Permanente Hospital to the 33-inch trunk line in Iris Avenue.

Stormwater

Stormwater within the City is jointly managed by the Riverside County Flood Control District and Water Conservation District (RCFCWCD) and the City. Existing and proposed storm drain facilities within the City are shown within Map PPS-4 in the Parks and Public Services Element in the City's General Plan (City of Moreno Valley 2021). Map PPS-4 shows existing stormwater mains within Lasselle Street, Nason Street, parts of Iris Avenue, and Cactus Avenue, as well as shorter mains connecting to existing development surround the Project site. Additionally, an open channel (Channel F) transects the Project site and serves as stormwater conveyance and flood control. New storm drains and infill storm drain extensions/connections are proposed within Brodiaea Avenue, north of

Phase 6 of the Project site (City of Moreno Valley 2021). See Section 4.10 of this Subsequent EIR (SEIR) for additional discussion of stormwater drainage facilities in the vicinity of the Project site.

Solid Waste

Waste Management of Inland Valley provides solid waste, recycling, composting, and special waste handling services within the City. Waste Management provides trash, recycling, and green waste pickup for residential customers and business customers. The only contract hauler within the City is Waste Management.

The Project area is served by two separate landfills. The first is the Badlands Landfill, located approximately 6.5 miles from the Project site in the City and accessed from State Route 60 at Theodore Avenue. An alternate landfill serving the Project site is the Lamb Canyon Landfill, located between the City of Beaumont and the City of San Jacinto, with Interstate 10 to the north and Highway 74 to the south. As shown in Table 4.19-5, as of December 2020, the Badlands Landfill had a reported remaining capacity of 7,800,000 tons and is projected to cease operations by the end of 2059 (CalRecycle 2023a). As of January 2015, the Lamb Canyon Landfill had a reported remaining capacity of 19,242,950 tons and is projected to cease operations by 2032 (CalRecycle 2023b).

Table 4.19-5. Landfill Capacity

Facility	Maximum Permitted Throughput	Maximum Capacity	Remaining Capacity
Badlands Landfill	5,000 tons/ day	82,300,000	7,800,000
Lamb Canyon Landfill	5,000 tons/ day	39,681,513	19,242,950

Source: CalRecycle 2023a, 2023b.

Electrical and Natural Gas

The Project site is located within the service area for Moreno Valley Electric Utility (MVU) and Southern California Gas Company (SoCalGas). MVU provides service to approximately 6,500 residential and commercial customers. The MVU service area covers 33.48 square miles within the City. As of 2021, MVU sources approximately 30.7% of energy resources from renewable energy resources (eligible hydroelectric and solar). Electric utilities are provided by both underground and overhead transmission and distribution facilities in the Project area (City of Moreno Valley 2023a). SoCalGas distributes natural gas to over 500 communities and has a service area of approximately 20,000 square miles (City of Moreno Valley 2021).

Telecommunication

Telecommunications services to the Project site may be provided by various distributors. Current communications and internet providers within the City include Frontier, Spectrum, and AT&T (City of Moreno Valley 2023b). Telecommunications are provided by both overhead and underground facilities in the Project area.

4.19.2 Regulatory Framework

Federal

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to the enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA) (33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

Resource Recovery and Conservation Act

The Resource Recovery and Conservation Act, Subtitle D, focuses on state and local governments as the primary planning, regulating, and implementing entities for the management of non-hazardous solid waste, such as household solid waste and nonhazardous industrial solid waste. Subtitle D provides regulations for the generation, transportation, and treatment, storage, or disposal of hazardous wastes.

State

Senate Bills 610 and 221

On January 1, 2002, Senate Bill (SB) 610 took effect. SB 610, which was codified in the Water Code beginning with Section 10910, requires the preparation of a water supply assessment for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. SB 610 stipulates that when environmental review of certain development projects is required, the water agency that is to serve the development must complete the water supply assessment to evaluate water supplies that are or will be available during normal, single-dry, and multiple-dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with a project.

SB 221, enacted in 2001 and codified as Government Code Section 66473.7, requires a city, county, or local agency to include a condition to any tentative subdivision map that a sufficient water supply shall be available to serve the subdivision. The term "sufficient water supply" is defined as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the proposed subdivision project's projected water demand, in addition to existing and planned future water uses, including agricultural and industrial uses, within the specified service area. SB 221 further requires any verification of "projected" water supplies to be based on entitlement contracts, capital outlay programs and regulatory permits and approvals.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739 (Dickinson), Senate Bill 1168 (Pavley), and Senate Bill 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins,

2042 is the deadline. Through SGMA, the California Department of Water Resources provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies to manage basins sustainably and requires those Groundwater Sustainability Agencies to adopt GSPs for crucial groundwater basins in California.

Urban Water Management Planning Act

In 1983, the state legislature enacted the Urban Water Management Planning Act (California Water Code, Sections 10610–10656), which requires specified urban water suppliers within the state to prepare an UWMP and update it every 5 years. State and local agencies and the public frequently use UWMPs to determine if agencies are planning adequately to reliably meet water demands in various service areas. As such, UWMPs serve as an important element in documenting water supply availability and reliability for purposes of compliance with state laws, SB 610 and SB 221, which link water supply sufficiency to large land-use development Project approvals. Urban water suppliers also must prepare UWMPs, pursuant to the act, to be eligible for state funding and drought assistance.

The UWMP provides information on water usage, water supply sources, and water reliability planning within a specified water agency service area. It also may provide implementation schedules to meet projected demands over the planning horizon; a description of opportunities for new development of desalinated water; groundwater information (where groundwater is identified as an existing or planned water source); description of water quality over the planning horizon; and identification of water management tools that maximize local resources and minimize imported water supplies. Additionally, the UWMP evaluates the reliability of water supplies within the specified service area. This includes a water supply reliability assessment, water shortage contingency plan, and development of a plan in case of an interruption of water supplies. The EMWD UWMP is further discussed below.

Executive Order B-29-15

In response to the ongoing drought in California, Executive Order (EO) B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Integrated Waste Management Act of 1989 (Assembly Bill 939)

The Integrated Waste Management Act of 1989, or Assembly Bill (AB) 939, requires each city, county, and regional agency to develop a source reduction and recycling element of an integrated waste management plan that includes source reduction, recycling, and composting components. A minimum of a 50% diversion rate of all solid waste from landfill disposal or transformation by January 1, 2000, was required and met.

Assembly Bill 341

In 2011, the state legislature enacted AB 341 (California Public Resources Code, Section 42649.2), increasing the diversion target to 75% statewide. AB 341 also requires the provision of recycling service to commercial facilities that generate 4 cubic yards or more of solid waste per week, and multi-family residences with five or more units.

Assembly Bill 1826

In October 2014, Governor Brown signed AB 1826 (Chapter 727, Statutes of 2014), codified as California Public Resources Code Section 42649.8 et seq., requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. Organic waste means food waste, green waste, landscape and pruning waste, non-hazardous wood waste, and food-soiled paper waste that is mixed in with food waste. Currently, businesses that generate 4 cubic yards or more of solid waste per week must have had an organic waste recycling program in place. Multi-family properties are regulated but only required to divert green waste and non-hazardous wood waste. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including certain multi-family residential units, starting on January 1, 2016. An exemption process is available for rural counties.

Title 14: Natural Resources – Division 7

Title 14, Division 7, Department of Resources Recycling and Recovery, of the California Code of Regulations sets minimum standards for solid waste handling and disposal, including specific regulations regarding waste tire storage and disposal, hazardous waste disposal facilities, construction and demolition and inert debris transfer/processing, construction and demolition waste and inert debris disposal, transfer/processing operations and facilities, siting and design, operation standards, record keeping, and additional operating requirements for facilities. Additional guidance and requirements for compostable materials handling operations and facilities, asbestos handling and disposal, resource conservation programs, farm and ranch solid waste cleanup and abatement, used oil recycling program, electronic waste recovery and recycling, solid waste cleanup among others are also addressed in Title 14.

Title 27: Environmental Protection – Division 2, Solid Waste

Title 27, Division 2, of the California Code of Regulations sets the criteria for all waste management units, facilities, and disposal sites including regulations of the California Integrated Waste Management Board and State Water Resources Control Board. Waste classification, siting, construction standards, water quality monitoring and response programs, operating criteria, daily and immediate cover, handling and equipment, controls, gas monitoring and control, closure and post-closure standards, and financial assurances are all aspects covered in Title 27.

Senate Bill 1383

In 2016, SB 1383, codified as California Health and Safety Code Section 39730.5 et seq., was passed to require collection services of organic waste to all residents and businesses. The statute requires that every jurisdiction that provides solid waste collection services also provide organic waste collection. The statute sets requirements for single-family and multi-family residential, commercial, and institutional developments including requirements for participation, sorting, and labeling of containers (CalRecycle 2023c). SB 1383 sets a goal to have a 75% reduction in disposal of organic waste statewide from the 2014 level by 2025.

Local

Eastern Municipal Water District Urban Water Management Plan

As mentioned above, the Urban Water Management Planning Act requires that each urban water supplier providing water for municipal purposes, either to more than 3,000 customers, or more than 3,000 AF per year (AFY), must prepare, adopt, and update a UWMP at least once every 5 years on or before December 31, in years ending in

5 and 0. The intent of an UWMP is to present information on water supply, water usage/demand, recycled water, and water use efficiency programs in a respective water district's service area. The UWMP also serves as a valuable resource for planners and policy makers over a 25-year time frame. As such, the EMWD's latest UWMP, which was adopted in 2020, ensures that water supplies are being planned to meet future growth.

The EMWD's 2020 UWMP was prepared consistent with the recommended organization provided in DWR's Final Urban Water Management Plan Guidebook 2020, dated July 2021. The EMWD's Water Shortage Contingency Plan is discussed in the 2020 UWMP. The EMWD's coordination efforts with other planning agencies are discussed, including coordination efforts with the Southern California Association of Governments. The EMWD's eligibility to receive grants and loans administered by the State of California and/or DWR, as a result of preparing the 2020 UWMP, is discussed. Information is provided in the 2020 UWMP which demonstrates the EMWD's prior, continued, and projected reduction on imported water supplies obtained from MWD through the Colorado River Aqueduct. The 2020 UWMP concludes that the projected water supplies would be sufficient to meet the projected water demand within the EMWD for normal and multiple-dry years.

2040 General Plan

Parks and Public Services Element

The Parks and Public Services Element of the 2040 General Plan describes the existing public services, and infrastructure within the City. This element includes goals and policies related to the City's public utility infrastructure. The following relevant goals and policies identified in the Park and Public Services Element apply to the Project (City of Moreno Valley 2021):

Goal PPS.4: Provide for utilities and infrastructure to deliver safe, reliable services for current and future residents and businesses.

Policy PPS.4-1: Coordinate with utility agencies to provide for water and sewer systems capable of meeting the daily and peak demands of Moreno Valley residents and businesses, including the provision of adequate fire flows.

Policy PPS.4-2: Coordinate development activity with the provision of public infrastructure and services to eliminate possible gaps in service provision.

Policy PPS.4-3: Prior to the approval of any new development application, continue to require "will serve" letters from utility providers demonstrating that adequate water and septic or sewer service capacity exists or will be available to serve the proposed development in a timely manner.

Policy PPS.4-4: Whenever possible, project proponents should ensure that public water, sewer, drainage and other backbone facilities needed for a project phase are constructed prior to or concurrent with initial development within that phase. It shall be the ultimate responsibility of the sponsor of a development project to assure that all necessary infrastructure improvements (including system wide improvements) needed to support project development are available at the time that they are needed.

Policy PPS.4-6: Maintain a "dig once" policy to streamline the installation of infrastructure, minimize disruption from construction activities, and optimize coordination among responsible agencies and developers.

Policy PPS.4-A: Share information on development activity and growth projections with utility providers and coordinate with responsible agencies to ensure adequate planning of public utilities to serve the community.

The 2006 General Plan objectives and policies were also considered. For further information regarding those policies and consistency of the Project with such policies, please refer to Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

Sewer System Management Plan

The Sewer System Management Plan from EMWD was prepared in 2019 and serves as a plan to manage and operate the sanitary sewer system and reduce sanitary sewer overflows. The mission for the plan is to deliver safe, reliable, economical water, wastewater, and recycled water services. The plan further identifies goals, objectives and tactics to be able to prevent and reduce sanitary sewer overflows. Section V of the plan outlines the design and performance standards for new developments (EMWD 2019).

Moreno Area Drainage Plan

The RCFCWCD has drafted the Moreno Area Drainage Plan to address drainage within the City. The Moreno Area Drainage Plan is a long-range plan for storm drain conveyance systems within the City. It describes the existing hydrology of the plan area, proposed improvements to the City's drainage facilities, alternatives, estimated costs, and recommendations. The Moreno Area Drainage Plan was revised in 2015 to provide an updated plan to address the changes in planning and population within the City. The plan identifies proposed open channels and storm drain through the Project site (RCFCWCD 2015).

City of Moreno Valley Municipal Code

Land Division

Chapter 9.14 of the Municipal Code outlines general provisions on land divisions within the City, including installation of utilities in development. Section 9.14.110 outlines design requirements for flood control and drainage facilities. Section 9.14.120 outlines when dry sewers are permitted if connection to wet sewer systems are not available. Section 9.14.130 outlines the requirements for the building of electrical and communication facilities.

Waste Management

Chapter 8.80 of the Municipal Code addresses recycling and diversion of waste during construction. Section 8.80.020 outlines the diversion requirements for construction and demolition within the City. Section 8.8.030 states that prior to issuance of a permit for any construction project, a waste management plan shall be prepared for the construction. The plan shall contain the estimated weight or volume of waste to be generated by the project, the maximum amount that can be feasibly diverted, the vendors that will be used, and the volume or weight to go into the landfill.

4.19.3 Significance Criteria

The significance criteria used to evaluate the project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact would occur if the project would:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
2. Have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.
3. Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
5. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.19.4 Impact Analysis

4.19.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR determined that the original SP 218 development would require new on-site facilities for wet and dry utilities. Impacts to utilities were based on the proposed development of 2,922 dwelling units, 24.1 acres of commercial, 80.5 acres of schools, 51.1 acres of parks, and a 148.7-acre golf course. Development of the described original SP 218 was estimated to require 2.89 million gallons of potable water per day and generate 1.1 million gallons of sewage per day. Existing surrounding water and sewer lines were found to be available to serve the Specific Plan Area. The residential portion of the original SP 218 was estimated to generate approximately 50,400 pounds of solid waste per day. Recycling and solid waste diversion measures within the Specific Plan were found to adhere to the City policies. New utility lines and transmission pipes were required to be installed underground to serve the original SP 218. EMWD was required to prepare a Master Plan of Service and issue service letters for future development. Impacts to utilities and service systems were identified to be less than significant in the 1999 EIR (City of Moreno Valley 1999b).

Mitigation

No mitigation was required.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR, prepared to expand upon specific issue areas, did not include additional information or analysis related to utilities.

Mitigation

No additional mitigation was identified.

2005 Addendum

Analysis

The 2005 Addendum concluded that the revised senior housing development would consume substantially less water and energy utility services and generate substantially less wastewater and solid wastes than the original SP 218 analyzed in the 1999 EIR due to the reduced population that would be housed in age-restricted units. The UWMP prepared by the EMWD in 2000 estimated a 57% decrease in water consumption and a 55% decrease in sewage generation. The 2005 Addendum concluded that there were no new or significantly more severe impacts to utilities and service systems (City of Moreno Valley 2005b).

Mitigation

No additional mitigation was identified.

4.19.4.2 Project Impact Analysis

The Project is an amendment to the 2005 Aquabella SPA, which amended the original SP 218. This second amendment to the Specific Plan would introduce an additional 12,078 multifamily housing units to the Project site on top of the 2,922 residential dwelling units that were previously approved under the original SP 218 and 2005 Aquabella SPA, for a total of 15,000 units. The proposed Project would expand the eastern boundary of the Project site to include one parcel totaling 10 acres. Additionally, the Project site would include 40 acres designated for school use with up to three elementary school sites and one middle school site, compared to 30.5 acres in the original SP 218 (not including the completed 50-acre high school). Like the 2005 Aquabella SPA, the Project proposes to complete a 40-acre lake complex. Impacts to utilities and service systems that would result from the Project are analyzed below.

Threshold 1:Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water

Existing water systems and facilities for potable and recycled water connections are located in proximity to the Project site. The Project proposes a Conceptual Potable Water Plan and a Conceptual Recycled Water Plan in Section 4 of the Specific Plan, which depict proposed extensions and connections with existing water facilities to connect through the Project site. Connections to the water system would ensure adequate domestic and fire flow

service. Additional off-site or on-site water facilities may be required by EMWD. As stated in Section 4.3.2 of the Specific Plan, all necessary extensions to connect with existing pipelines would be coordinated with EMWD prior to construction. Prior to construction, the applicant would contact EMWD staff to establish development design conditions and determine if any revisions are required to the conceptual plans.

New buildings would be designed with the latest water-efficient plumbing systems, fixtures, and faucets. Drought-tolerant landscaping would reduce the demand for irrigation water. Irrigation systems would use smart controllers to automatically adjust the amount and frequency of water based on current weather and soil conditions, and recycled water would be used for landscape irrigation.

The Project proposes the inclusion of a human-made lake system, which would be filled by a combination of groundwater and stormwater. The initial filling of the lakes would require approximately 400 AF of groundwater, after which the lake system would require approximately 200 AFY for maintenance and to account for evaporation. Water used to fill the lakes on site would be sourced from two groundwater wells that currently exist on site, as well as stormwater as part of the site's water quality treatment planning. As discussed in Section 4.10 and Section 4.9, groundwater beneath the Project site may contain elevated concentrations of contaminants of concern that that may affect the proposed beneficial uses of the lake if used in the filling of the proposed lake. Water quality of the lake would be required to meet water quality objectives for inland surface waters, as described in the Santa Ana River Basin Plan, and would be required to complete an application for discharging to surface waters under the National Pollution Discharge Elimination System permit program (SARWQCB 2019). If it is unsuitable or infeasible to use groundwater to fill the lake, the lake would be filled by recycled water supplied by EMWD.

EMWD prepared a WSA for the Project in October 2023 (Appendix L) pursuant to Water Code Section 10910 et seq. and Government Code Section 66473.7, as amended by SB 610 and SB 221 in 2001. EMWD estimated demand projections for the Project based on commercial office, medium density residential, and open space conservation land uses. Based on EMWD calculations, the Project would result in a total demand of 3,519 AFY (Table 4.19-6). EMWD acknowledges the Project would offset approximately 412 AFY of water demand through the use of recycled water and the on-site groundwater well, reducing the water demand to 3,107 AFY. However, to be conservative EMWD prepared the WSA using the full demand of 3,519 AFY.

Table 4.19-6. EMWD WSA's Project Specific Demand Estimate

Land Use Category	Average Day Demand (gpd)	Annual Demand (AFY)
Very High Density Residential[1]	2,625,000	2,942
Hotel	37,500	42
Commercial Retail	55,000	62
Public Facilities	88,000	99
Open Space Recreation	154,000	173
Multi-Purpose Lake	180,000	202
Total Without Recycled Water or Groundwater[2]	**3,139,500**	**3,519**
Planned Supply Offsets		
Recycled Water	187,000	210
Private Well	180,000	202
Total[3]	**2,772,500**	**3,107**

Source: Appendix L.

1 Proposed density 25-50 dwelling units per acre

2 Totals may not agree due to rounding

[3] Planned supply offsets are speculative, and to be conservative, the WSA was prepared assuming the entire Project demand would be supplied by EMWD's potable system. Offsets are estimates and could be greater or less than shown in table.

EMWD's UWMD projected water demands for its service area are based on the projected population forecasts for the Southern California Association of Governments regional growth forecast (known as 2020 Connect SoCal). According to the EMWD 2020 UWMP, EMWD has the ability to meet current and projected water demands through 2045 during normal, historic single-dry and historic multiple-dry year scenarios as shown in Tables 4.19-1, 4.19-2, and 4.19-3 (EMWD 2020).

The WSA indicates the total Project water demand represents an increase in the estimated demand considered in the 2020 UWMP. However, the WSA finds that the water supply demand of the Project and other cumulative development projects in the service area remain within the level of demand accounted for in the 2020 UWMP.

Table 4.21-7 shows that EMWD would be able to meet the Project's demand for water with existing water supplies and supply facilities. After accounting for the demands of the Project and other developments in EMWD's service area, EMWD has adequate supplies to meet Project and cumulative water demand while maintaining an over 10,000 AFY buffer; this buffer is expected to grow in the future due to factors such as ongoing water use efficiency legislation and potable water offsets from recycled water conversions.

Table 4.19-7. Projected EMWD Water Demand and Supply and Project Water Demand

	2025	2030	2035	2040	2045
Water Supply, Reasonably Available Volume, (AFY)	145,930	157,320	168,900	178,700	187,100
Projected Water Demand, Potable and Raw (AFY)	102,600	108,300	114,400	118,900	123,000
Remaining Supply	43,330	49,020	54,500	59,800	64,100
Project Water Demand (No Recycled Water Scenario)	3,519	3,519	3,519	3,519	3,519
Water Demand with Project	106,119	111,819	117,919	122,419	126,519
Remaining Supply with Project	39,811	45,501	50,981	56,281	60,581

It is further notable that the Project would be built out over a 12- to 15-year period, with full buildout occurring between 2037 and 2040. Prior to full buildout, Project operational water demand would be less than projected due to water conservation and efficiency measures implemented at the state, regional, and local levels.

EMWD projects that future Project water demand will be met through a combination of additional imported water from MWD and the development of local supply including increased production of potable groundwater, desalination of brackish groundwater, and the use of recycled water. EMWD also plans to continue its efforts to enhance water use efficiency within its service area. Accordingly, the Project would not require or result in the relocation or construction of new or expanded water supply facilities but would be served by existing and projected water supply projects.

Compared to the prior approvals, the Project would introduce an estimated approximately 34,664 more people for a total of 43,050 people being introduced to the Project site. However, compared to the 1999 EIR, water demand would be similar, due in large part to the multifamily uses and substantial water efficiency improvements in building and irrigation. The 1999 EIR evaluated the then-estimated water demand of the project at buildout to be 2.89 mgd, or 3,241 AFY, compared to the current Project's demand of 3,107 AFY (with recycled water and well supplies) to 3,519 AFY (without recycled water and well supplies). The 1999 EIR found impacts to water supply would be less than significant. As a result of changes to age-restricted residential uses, the 2005 Aquabella SPA was found to reduce water demand compared to the 1999 EIR to approximately 903.67 AFY, which would continue to result in less than significant impacts related to water supply facilities. Overall, the Project would increase water demand by 2,203.3 to 2,615.33 AFY compared to the 2005 Addendum. Table 4.19-8 compares the Project's water demand with the 1999 EIR and 2005 Addendum. As with the prior approvals, EMWD has the ability to provide water service to the site without the relocation or construction of expanded water infrastructure or development of new supply sources. Similar to prior approvals, impacts related to the relocation or construction of new or expanded water supply facilities would be **less than significant.**

Table 4.19-8. Project Water Demand Compared to 1999 EIR and 2005 Addendum Water Demand

Demand Type	Average Day Demand (GP)	Annual Demand (AFY)
Current Project		
Potable Water		
Very High Density Residential[1]	2,625,000	2,942
Hotel	37,500	42
Commercial Retail	55,000	62
Public Facilities	88,000	99
Open Space Recreation	178,548	200
Multi-Purpose Lake	180,000	202
	Total	**3,519**
Recycled Water		
Recycled Water	187,000	210
Private Well	180,000	202
	Total	**412**
	Total Considering Recycled Water Offsets	**3,107**
1999 EIR		
Residential	N/A	2,195
Commercial	N/A	81
Schools	N/A	361
Parks/Recreation	N/A	604
	Total	**3,241**
2005 Addendum		
Potable Water		
Senior Housing	876,600	2.69
Commercial	75,000	0.23

Table 4.19-8. Project Water Demand Compared to 1999 EIR and 2005 Addendum Water Demand

Demand Type	Average Day Demand (GP)	Annual Demand (AFY)
High school	200,000	0.61
Parks	44,010	0.14
	Total	**3.67**
Recycled Water		
Lakes	5.1 acres	900
	Total	**903.67**
	Change in Water Demand from 2005 Aquabella SPA	**+2,615.33**

Note:
[1] Proposed density 25-50 dwelling units per acre

In summary, potential environmental impacts related to Project connections to the existing water and recycled water systems would be similar to prior approvals and are considered as part of the Project throughout this SEIR. Like prior approvals, EMWD has indicated it would have adequate water supplies and facilities under existing and future scenarios to satisfy the most conservative estimated Project water demand, as set forth in the EMWD WSA. Thus, no relocation or construction of new or expanded water supply facilities would be required to meet the Project demand. Thus, impacts related to the construction or expansion of water facilities would be similar to prior approvals and **less than significant.**

Wastewater

As described in Section 4.19.1, above, the sewer collection system is owned and managed by EMWD. Wastewater is collected in the local sewer system and then treated at the four active regional water reclamation facilities, which have a current total surplus capacity of 26 mgd. The Moreno Valley Facility currently utilizes 11.5 mgd (72%) of its current 16 mgd capacity, with a planned ultimate capacity of 18 mgd. The Moreno Valley Facility also has the ability to divert 2 mgd to the Perris Valley Facility, which has more capacity. The EMWD is currently utilizing only 64% of the current capacity of all water reclamation facilities.

The Project would generate approximately 2.468 mgd (2,717 AFY) of wastewater, as shown in Table 4.19-9 (Appendix L). The 1999 EIR estimated a total 1.1 mgd (1,232 AFY) of wastewater would be generated and found existing sewer capacity sufficient to serve the project site. Sewer demand was reduced from the 1999 EIR to the 2005 Addendum due to the age-restricted residential use compared to the 1999 EIR single-family residential land use. Table 4.19-10 compares the Project's sewer demand with the 1999 EIR and 2005 Addendum. Overall, the Project would increase sewer demand by 1.368 mgd (1,535 AFY) compared to the 1999 EIR and 1.9 mgd (2,132AFY) compared to the 2005 Addendum.

The Project's wastewater demand represents approximately 3.29% of the total amount of wastewater collected by EMWD per day and approximately 15% of the current 16 mgd capacity of the Moreno Valley Facility. The amount of wastewater generated by the Project of 2.468 mgd at full buildout would be within the existing and future surplus treatment capacity of EMWD's four regional water reclamation facilities (existing 26 mgd capacity) and the Moreno Valley Facility (existing 4.5 mgd surplus capacity).

Table 4.19-9. Project Sewer Demand

Demand Type	Units	Qty	Edu	Gpd/ Unit	Total Gpd	Annual Acre Feet
Very High Density Residential	EDU	9,750	9,750	235	2,291,250	2,597
Schools: Total Area (4 total)	AC	40	200	235	47,000	53
Town Center – 49.9K square feet	EDU	5	25	235	5,875	7
Parks (no sewer for Parkways)	AC	40	200	235	47,000	53
Hotel – 300 keys	Rooms	300	195	116	34,650	39
					Total Sewer	**2,717**

Source: Appendix L.

Table 4.19-10. Project Sewer Demand Compared to 2005 Addendum Sewer Demand

Demand Type	Total Gpd	Annual Acre Feet
Project		
Residential	2,291,250	2,567
Schools	47,000	53
Town Center	5,875	7
Parks	47,000	53
Hotel	34,650	39
	Total	**2,717**
2005 Addendum		
Residential	441,000	494
Commercial and Schools	126,000	141
	Total	**635**
	Change in sewer demand	**2,082**

The sewer trunk lines surrounding the Project site include a 12-inch line in Cactus Avenue, a 15-inch line in Oliver Street, and a 21-inch to a 24-inch line in Nason Street connecting to a 33-inch line in Iris Avenue. Existing crossings of one 8-inch and one 12-inch line under Line F channel have been previously installed. The Project would include a 42-inch main adjacent to the channel. There is an existing 33-inch line that cuts through the Project connecting the wastewater from John F. Kennedy Drive and Kaiser Permanente Hospital flows to the 33-inch trunk line in Iris Avenue. The Project will complete the installation of a 42-inch main line adjacent to the Line F channel, after which the existing 33-inch main that takes wastewater from John F. Kennedy Drive and Kaiser Permanente Hospital through the Project will be abandoned. This line and the existing sewer main on Nason Street will serve as Project connection points to existing facilities. On site, the Project proposes to install a sewer main line beneath the backbone roadway traversing the Project site from Cactus Avenue along John F. Kennedy Drive to the 42-inch proposed trunk adjacent to the Line F channel. The Project proposes to install an energy-efficient system utilizing gravity to send flow through the proposed system. All necessary extensions to the existing facilities needed for the proposed wastewater flows will be coordinated with EMWD prior to construction. Environmental impacts associated with the construction of these extensions to serve the Project are considered as part of construction analysis in the evaluations throughout this SEIR. With the proposed wastewater improvements, the Project would provide adequate wastewater

infrastructure and supporting facilities to serve the proposed project. Further, EMWD will be responsible for reviewing Project plans to ensure sewer flows will be accommodated and not adversely impact the existing system.

Thus, similar to the prior approvals, the Project would not require the construction of new wastewater treatment facilities or expansion of existing facilities, which could cause significant environmental effects. Impacts would be **less than significant** and no mitigation is required.

Stormwater Drainage

Hydrology is discussed in detail in Section 4.10 of the SEIR. Development of the Project would alter the drainage patterns at the site compared to existing conditions but maintain similar changes to impervious surfaces compared to the previously analyzed 2005 Aquabella SPA. The Project would include a 40-acre lake system on the site as part of the proposed drainage plan; this is the same acreage and similar design to the lakes proposed as part of the 2005 Aquabella SPA and Addendum. The lake system would be used for stormwater runoff and post-construction BMPs (e.g., bioretention basins), acting as detention basins to reduce peak runoff before releasing it to off-site drainage facilities. The lake system would be designed to detain all runoff and release at a rate that is lower than the rate at which it enters the lakes. Lake spillway structures would be designed to reduce peak flow rates and reduce peak discharges to not exceed pre-Project peak discharges. As a result, the proposed improvements would not substantially increase the rate or amount of surface runoff such that the existing or planned capacity of stormwater drainage infrastructure would not adequately accommodate the Project. On-site and Project-related improvements are analyzed as part of the Project throughout this SEIR. Thus, similar to the prior approvals, the Project would not require the construction of new stormwater facilities or expansion of existing facilities, which could cause significant environmental effects. Impacts would be **less than significant,** and no mitigation is required.

Electric Power, Natural Gas, and Telecommunication Facilities

Dry utilities, such as electric, natural gas, and telecommunication infrastructure, would be required to be installed to serve the Project. These dry utilities would be located within underground conduits in the public or private street corridors/rights-of-way within the Project site. The Project would be served by MVU for electricity and SoCalGas for natural gas. The Project would include sustainability features such as including solar roofs on residential, commercial, and mixed-use buildings. These Project-related connections and improvements are analyzed as part of Project construction throughout this SEIR.

As described in Section 4.6, Energy, electricity consumption during Project construction would include temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by MVU. The electricity used for such activities would be temporary, would be substantially less than that required for Project operation, and would have a negligible contribution to the Project's overall energy consumption, As shown in Table 4.5-3, the Project is anticipated to consume approximately 131,591,218 kilowatt-hours (131,597.281 megawatt-hours) of electricity per year during project operation; however, with implementation of PDF-AQ/GHG-3 and PDF-AQ/GHG-4, the Project would consume 79,617,201 kilowatt-hours (79,617.201 megawatt-hours) of electricity annually during operation. MVU has forecasted that its peak demand in 2037, the latest available forecast from the Integrated Resource Plan, would be approximately 362,142 megawatt-hours/year. The Project's electricity consumption represents approximately 22% of the projected sales demand for MVU with the inclusion of PDF-AQ/GHG-3 and PDF-AQ/GHG-4 (MVU 2018). As described in the MVU Integrated Resource Plan, future energy resources are expected to be obtained via short-, medium-, and long-term power purchase agreements. As described in the Integrated Resource Plan, MVU targets

to procure an additional 140,330 megawatt-hours of energy by 2037 (MVU 2018). Given that the Project would increase demand by 79,617,201 kilowatt-hours, the Project's electricity demand could be served by MVU.

Natural gas is not anticipated to be required during construction of the Project. The Project without PDFs would consume natural gas for building operation and swimming pool and spa heating. Without the implementation of PDF-AQ/GHG-3, the Project would result in consumption of approximately 246,088,681 kBTU of natural gas per year at buildout in 2037. As previously discussed, the Project would prohibit the installation of natural gas infrastructure in all residential and nonresidential buildings per PDF-AQ/GHG-3, with restaurant land uses being the only exception. Buildout of the Project would result in consumption of approximately 1,499,695 kBTU of natural gas per year at buildout in 2037. As described in Section 4.6, SoCalGas delivered approximately 431 million therms (43.1 billion kBTU) to Riverside County (CEC 2023) and therefore the Project would represent less than 0.01% of the total energy demand for Riverside County and would not require the expansion of existing facilities or new facilities.

Project residents would be able to choose from various distributors for telecommunication services in this infill area. No new or expanded telecommunication facilities would be required.

Thus, similar to the prior approvals, the Project would not require the expansion or construction of new dry utilities, which could cause significant environmental effects. Therefore, impacts would be **less than significant.**

Threshold 2:Would the Project have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

As discussed under Threshold 1, above, the EMWD is anticipated to be able to meet future demands for normal year, single dry years, and multiple drought years through 2045, as show in Tables 4.19-1, 4.19-2, and 4.19-3 above. As discussed under Threshold 1, The WSA prepared by EMWD indicated EMWD would have sufficient supplies to serve the Project and reasonably foreseeable future developments during normal, dry, and multiple dry years without supply shortfalls. EMWD projects that future Project and service area water demands will be met through a combination of additional imported water from MWD; the development of local supply including increased production of potable groundwater, desalination of brackish groundwater, and the use of recycled water; and enhancements to water use efficiency within its service area.

As discussed above, under a worst-case scenario the Project would utilize approximately 3,519 AFY of potable water, which would be reduced to 3,107 through the use of recycled water and well water. In addition, the Project would implement water efficient irrigation, landscaping, appliances, and fixtures to further reduce water demand. Refer to the Specific Plan for Project sustainability features.

The Project would increase potable water demand compared to the 2005 Addendum (demand 903.67 AFY) and result in a similar demand compared to the 1999 EIR's demand of 3,241 AFY. Like the prior approvals and as shown in Tables 4.19-6 and 4.19-7, above, EMWD would continue to be able to meet the Project's demand for water reasonably foreseeable future developments during normal, dry, and multiple dry years. Therefore, impacts would be **less than significant.**

Threshold 3:Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

As described under Threshold 1, above, the sewer collection system is owned and managed by EMWD; wastewater is collected in the local sewer system and then treated at the four active regional water reclamation facilities. As shown in Table 4.19-4, the Moreno Valley Facility currently utilizes 72% of the current capacity and 63.9% of the ultimate capacity. The Moreno Valley Facility also has the ability to divert 2 million gallons per day to the Perris Valley Facility, which has more capacity. The EMWD is currently utilizing only 64% of the current capacity of all water reclamation facilities.

As shown in Table 4.19-9, the Project would generate approximately 2,717 AFY of wastewater (Appendix L). As described above, the Project would increase sewer demand by 2,082 AFY compared to the 2005 Addendum. The amount of wastewater generated by the Project of approximately 2 mgd at full buildout would be within the existing and future surplus treatment capacity of EMWD's four regional water reclamation facilities (existing 26 mgd capacity) and the Moreno Valley Facility (existing 4.5 mgd surplus capacity). Impacts would be **less than significant**.

Threshold 4: Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

As discussed under Section 4.19.1, above, solid waste collected from the Project would be taken to one of two landfills that serve the City: the Badlands Landfill or the Lamb Canyon Landfill. The Badlands Landfill is permitted to accept 5,000 tons per day, has a maximum capacity of approximately 82,300,000 tons, and a remaining capacity of 7,800,000 tons as of December 2020. It is anticipated that this landfill will cease operation in 2059 (CalRecycle 2023a). The Lamb Canyon Landfill is permitted to accept 5,000 tons per day, has a maximum capacity of approximately 39,681,513 tons, and a remaining capacity of 19,242,950 as of January 2018. It is anticipated that the landfill will cease operation in 2032 (CalRecycle 2023b).

As shown in Table 4.19-11, the Project would produce approximately 31.57 tons of solid waste a day and 11,523.1tons of waste per year. The 1999 EIR estimated that the original SP 218 would generate 50,400 pounds per day, or 22.86 tons per day. The 2005 Addendum did not provide an updated estimation for solid waste generation for the 2005 Amendment. The Project would result in an increase of 8.71 tons per day and 3,179.2 tons per year compared to the analysis in the 1999 EIR.

Table 4.19-11. Project Waste Generation

Demand Type	Qty	Generation Rate	Waste Generated Per Day	Tons Per Day	Total Tons/Year
Very High Density Residential	15,000 DU	4 lbs/DU/day	60,000 lbs	30.01	10,953.65
Schools	3,750 students	0.5 lb/student/ day	1,875 lbs	0 94	343.1
Town Center	49,000 SF	13 lb/1000 sf/ day	637 lbs	0.32	116.8
Hotel	300	2lb/room/ day	600 lbs	0.30	109.5
			Total Waste Generation	**31.57**	**11,523.1**

Source: CalRecycle 2019.

The Project's waste generation represents 0.63% of the total daily capacity of the Badlands and Lamb Canyon Landfills. Given the above, the available capacity of these landfills would be able to accommodate the Project. Further, as discussed below, the Project would be required to comply with the City's Municipal Code regarding solid waste and recyclable material storage areas (Municipal Code, Section 6.02.050). Additionally, the City's building code requires development projects to complete and submit a waste management and recycling plan for approval prior to issuance of building permits. The waste management and recycling plan would identify the project type and estimate the amount of materials to be recycled during construction. Finally, the Project would comply with the current California Green Building Code (Title 24), which requires construction waste recycling. Accordingly, the Project would not impair solid waste reduction goals.

Thus, the similar to prior approvals, impacts would be **less than significant**.

Threshold 5: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The Project would comply with the California Integrated Waste Management Act of 1989 (AB 939 and AB 341, codified as California Public Resources Code Section 40500 et seq.), which requires jurisdictions to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the 2000, as well as including the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020 and annually thereafter. The Project would also comply with SB 1383, which mandates a 75% reduction in disposal of organic waste statewide by 2025.

Through its partnership with Waste Management, the franchise hauler, the City provides an array of programs and tools intended to support statewide waste reduction objectives. The hauler and City staff promote recycling programs through billing inserts, flyers, social media postings, site visits, and outreach to the various businesses and organizations. Moreover, the City takes proactive steps to ensure compliance with AB 341 and/or AB 1826 requirements. The Project would not inhibit implementation of these programs and would be required to comply with the City's Municipal Code regarding solid waste and recyclable material storage areas (Municipal Code, Section 6.02.050). Additionally, the City's building code requires development projects to complete and submit a waste management and recycling plan for approval prior to issuance of building permits. The waste management and recycling plan would identify the project type and estimate the amount of materials to be recycled during construction. Finally, the Project would comply with the current California Green Building Code (Title 24), which requires construction waste recycling.

For these reasons, the Project would be in compliance with all federal, state, and local management and reduction statutes and regulations related to solid wastes. Therefore, as with prior approvals, impacts would be **less than significant**.

4.19.5 Significance of Impacts Before Mitigation

Threshold 1: New or Expanded Water, Wastewater Treatment, Stormwater Drainage, Electric Power, Natural Gas, or Telecommunications

Impacts related to the expansion or construction of new utilities would be **less than significant**. No mitigation is required.

Threshold 2: Insufficient Water Supplies

Impacts to water supplies would be **less than significant**. No mitigation is required.

Threshold 3: Inadequate Wastewater Treatment Capacity

Impacts to wastewater facilities would be **less than significant**. No mitigation is required.

Threshold 4: Excessive Solid Waste Generation

Impacts related to generation of solid waste would be **less than significant**. No mitigation is required.

Threshold 5: Not Comply with Management and Reduction Statutes and Regulations

Impacts related to compliance with solid waste regulations would be **less than significant**. No mitigation is required.

4.19.6 Mitigation Measures

4.19.6.1 Previously Approved Mitigation Measures

1999 EIR

No significant impacts were identified; therefore no mitigation was required.

2003 Supplemental EIR

This topic was not included in the 2003 Supplemental EIR.

2005 Addendum

No significant impacts were identified; therefore no mitigation was required.

4.19.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

No significant impacts have been identified; therefore no mitigation is required.

4.19.7 Significance of Impacts after Mitigation

Threshold 1: New or Expanded Water, Wastewater Treatment, Stormwater Drainage, Electric Power, Natural Gas, or Telecommunications

Impacts related to the expansion or construction of new utilities would be **less than significant**.

Threshold 2: Insufficient Water Supplies

Impacts to water supplies would be **less than significant.**

Threshold 3: Inadequate Wastewater Treatment Capacity

Impacts to wastewater facilities would be **less than significant.**

Threshold 4: Excessive Solid Waste Generation

Impacts related to generation of solid waste would be **less than significant.**

Threshold 5: Not Comply with Management and Reduction Statutes and Regulations

Impacts related to compliance with solid waste regulations would be **less than significant.**

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4.20 Wildfire

This section describes the existing wildfire conditions of the Aquabella Specific Plan Amendment Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project. The 1999 Final Environmental Impact Report (EIR) for the Moreno Valley Field Station Specific Plan (1999 EIR), the 2003 Moreno Valley Field Station Specific Plan Final Supplemental EIR (2003 Supplemental EIR), and the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum (2005 Addendum) did not discuss impacts related to wildfire.

This section is based on information available in the 2040 and 2006 Moreno Valley General Plans and related EIRs and the Project's Wildfire Evacuation Plan, which is Appendix N to this Subsequent EIR. The section also relies on secondary source information including City of Moreno Valley (City) programs and plans, as well as data available from the California Department of Forestry and Fire Protection (CAL FIRE).

4.20.1 Existing Environmental Conditions

Physical Conditions

The Project site is situated in the southeastern portion of the City in western Riverside County. It is undeveloped and previously graded. The Project site is irregularly shaped and located east of Interstate 215, south of State Route 60, and north of Lake Perris. The site is accessible via Cactus Avenue, Nason Street, John F. Kennedy Drive, and Evergreen Street. The Project site is in the City's urban infill area, surrounded by residential and commercial land uses to the north; residential and commercial uses to the south; institutional, commercial, and residential uses to the east; and residential uses to the west. See Figure 3-2, Project Site in Chapter 3, Project Description.

Fire History

The City has experienced 803 wildfires between 2003 and 2016, 11 of which burned over 50 acres (City of Moreno Valley 2022). As shown in Figure 4.20-1, the Project site has not experienced a wildfire since before 1950. Since 1950, 100 fires have been recorded within a 5-mile radius of the Project site. These fires have generally been located around the Lake Perris Reservoir to the south, the Badlands to the east, and Kalmia Hills and Box Spring Mountains to the north (CAL FIRE 2023).

Vegetation Communities, Land Covers, Topography, and Terrain

The City is generally characterized as an urbanized community surrounded by rolling hills covered by annual grasses and sage brush. The majority of the urbanized area is flat (City of Moreno Valley 2021a). The Project site is located in the southeast corner of the City, which is generally characterized by urban land uses. The Project site consists of relatively flat, undeveloped land that has been previously disturbed. Vegetation on site is limited to the area adjacent to the existing drainage that runs through the Project site.

Climate, Weather, and Wind

The City is characterized as a having a semi-arid climate, with relatively low annual precipitation and high prevailing temperatures (City of Moreno Valley 2021a). Temperatures within the City range from highs from 65.6°F in December to 96.8°F in August and lows from 45.4°F in February to 65.5°F in August. The average temperature for the City ranges from 54.5°F to 79.5°F. Rainfall in the region varies substantially but average rainfall is typically

between 11 and 14 inches per year (City of Moreno Valley 2022). The City also experiences Santa Ana winds typical of Southern California that result in increased fire risk in the affected area. The Santa Ana wind conditions are a reversal of the prevailing southwesterly winds that usually occur on a region wide basis during late summer and early fall. Santa Ana winds are warm winds that flow from the higher desert elevations through the mountain passes and canyons. As they converge through the canyons, their velocities increase. Consequently, peak velocities are highest at the mouths of canyons and dissipate as they spread across valley floors or mesas. Santa Ana winds generally coincide with the regional drought period and the period of highest fire danger.

Fire Hazard Severity Zones

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for classifying Fire Hazard Severity Zones (FHSZs) based on statewide criteria. As shown in Figure 4.20-2, the Project site is not located within a State Responsibility Area (SRA) or any Very High FHSZ (VHFHSZ). There are wildland urban interface (WUI) areas located approximately 0.6 miles southeast of the Project site and approximately 1.1 miles east of the Project site, where the City abuts the Lake Perris State Recreation Area. These areas are designated as Local Responsibility Area VHFHSZ and SRA VHFHSZ and High FHSZ. CAL FIRE is currently in the process of updating the FHSZ map, which is shown in Figure 4.20-3. Changes to the FHSZ designation in SRAs primarily include the increase in fire hazard severity within the Bernasconi Hills and the eastern boundary of the City from high to very high. There were no changes to the Local Responsibility Area FHSZ within the City limits.

Emergency Response

The City's Office of Emergency Management (OEM) and Volunteer Services is responsible for establishing and implementing plans to minimize the impact and affects that can occur before, during and after a disaster. The OEM is responsible for operational readiness of the Emergency Operations Center, coordinating with other City departments, neighboring cities, the County and the State during emergency events, as well as providing trainings and information for the public (MVFD 2023a). The Project site is within the service area of the Moreno Valley Fire Department (MVFD), which provides fire protection and emergency medical services for the City under contract with CAL FIRE and the Riverside County Fire Department as part of an integrated regional fire protection system. Through its partnership with CAL FIRE and the County of Riverside, MVFD has access to hazardous materials response teams, fire arson investigation, fire hand crews, bulldozers, aircraft, public information and education, dispatch center, and assistance from the Riverside County Fire Office of Emergency Services (MVFD 2023b).

The MVFD operates out of seven fire stations located throughout the City. Three MVFD stations are located in proximity to the Project site and could serve the Project site: Station 91 (approximately 0.8 miles from Project site), Station 99 (approximately 0.9 miles from the Project site), and Station 65 (approximately 1.5 miles from the Project site) (MVFD 2023c). Facilities are located strategically in an effort to maintain a 4-minute travel time (City of Moreno Valley 2021a).

MVFD also provides a full range of fire prevention services, including public education, code enforcement, plan check, and inspection services for new and existing construction, as well as fire investigation (see Section 4.15, Public Services and Recreation, in City of Moreno Valley 2021b). Through a master mutual aid agreement, MVFD is obligated to provide fire apparatus to other jurisdictions in the region to assist in handling emergency calls for service, just as those jurisdictions are obligated to provide resources to the City. Additionally, the City's Office of Emergency Management is located within the MVFD allowing for a well-coordinated response to both natural and human-made disasters.

4.20.2 Regulatory Framework

Federal

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. National Fire Protection Association standards are recommended guidelines and nationally accepted good practices in fire protection, but are not laws or codes unless adopted as such or referenced as such by the California Fire Code (CFC) or the local fire agency.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995 and updated in 2001 and 2009 by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. The Federal Wildland Fire Management Policy acknowledges the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy is based on the following guiding principles, found in the Guidance for Implementation of Federal Wildland Fire Management Policy (National Wildfire Coordinating Group 2009):

- Firefighter and public safety are the first priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.
- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire management plans and activities are based upon the best available science.
- Fire management plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal agencies is an ongoing objective.

National Fire Plan

The National Fire Plan, titled Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President In Response to the Wildfires of 2000, was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The plan provides technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (DOI/USDA 2000).

International Fire Code

Created by the International Code Council, the International Fire Code addresses a wide array of conditions hazardous to life and property, including fire, explosions, and hazardous materials handling or usage. The International Fire Code places an emphasis on prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the International Fire Code uses a hazards classification system to determine the appropriate measures to be incorporated to protect life and property (often these measures include construction standards and specialized equipment). The International Fire Code uses a permit system (based on hazard classification) to ensure that required measures are instituted (ICC 2017). The International Code Council is currently in progress of updating the new International Fire Code (ICC 2021).

State

California Government Code

California Government Code, Sections 51175 through 51189, provide guidance for classifying lands in California as fire hazard areas and requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria, and makes the information available for public review. Further, local agencies must designate, by ordinance, VHFHSZs within their jurisdiction based on the recommendations of CAL FIRE.

Section 51182 sets forth requirements for maintaining property within fire hazard areas, such as defensible space, vegetative fuel management, and building materials and standards. Defensible space around structures in fire hazard areas must consist of 100 feet of fuel modification on each side of a structure, but not beyond the property line unless findings conclude that the clearing is necessary to significantly reduce the risk of structure ignition in the event of a wildfire. Clearance on adjacent property shall only be conducted following written consent by the adjacent owner. Further, trees must be trimmed from within 10 feet of the outlet of a chimney or stovepipe, vegetation near buildings must be maintained, and roofs of structures must be cleared of vegetative materials. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

California Code of Regulations

Title 14 Natural Resources

Title 14, Division 1.5, Chapter 7, Subchapter 3, Fire Hazard, also sets forth requirements for defensible space if the distances specified above cannot be met. For example, options that have similar practical effects include noncombustible block walls or fences, 5 feet of noncombustible material horizontally around the structure, installing hardscape landscaping or reducing exposed windows on the side of the structure with a less-than-30-foot setback, or additional structure hardening such as those required in the California Building Code (CBC)—California Code of Regulations Title 24, Part 2, Chapter 7A.

Title 24 California Building Standards Code

California Building Code

Part 2 of Title 24 of the California Code of Regulations contains the CBC. Chapter 7A of the CBC regulates building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a fire hazard area. Fire hazard areas as defined by the CBC include areas identified as FHSZs within SRAs or WUI fire areas. The purpose of Chapter 7A is to establish minimum standards for the protection of life and property by

increasing the ability of structures located in a fire hazard area to resist the intrusion of flames or burning embers projected by a wildfire, and to contribute to a systematic reduction in structural losses from a wildfire. New buildings located in such areas must comply with the ignition-resistant construction standards outlined in Chapter 7A. As stated above, the Project site is not located within an SRA FHSZ.

California Fire Code

Part 9 of Title 24 of the California Code of Regulations contains the CFC, which incorporates by adoption the International Fire Code with necessary California amendments. The purpose of the CFC is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the WUI and fire hazard areas.

The CFC and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The CFC is updated and published every 3 years by the California Building Standards Commission. The 2022 CFC took effect on January 1, 2023.

California Public Resources Code

California Public Resources Code, Section 4290, requires minimum fire safety standards related to defensible space that are applicable to residential, commercial, and industrial building construction in SRAs and lands classified and designated as VHFHSZs. These regulations include road standards for fire apparatus access, standards for signs identifying roads and buildings, fuel breaks and green belts, and minimum water supply requirements. These regulations do not supersede local regulations that equal or exceed minimum regulations required by the state.

California Public Resources Code, Section 4291, requires a reduction of fire hazards around buildings located adjacent to a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered in flammable material. Section 4291 requires 100 feet of defensible space around all sides of a structure, but not beyond the property line unless required by state law, local ordinance, rule, or regulations. Further, Section 4291 requires the removal of dead or dying vegetative materials from the roof of a structure and trimming of trees and shrubs from within 10 feet of the outlet of a chimney or stovepipe. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

Fire Hazard Severity Zones

CAL FIRE maps FHSZs based on fuel loading, slope, fire history, weather, and other relevant factors as directed by California Public Resources Code, Sections 4201–4204, and California Government Code, Sections 51175-51189. FHSZs are ranked from Moderate to Very High and are categorized for fire protection within a Federal Responsibility Area, SRA, or Local Responsibility Area under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively.

California Strategic Fire Plan

The 2018 Strategic Fire Plan for California reflects CAL FIRE's focus on fire prevention and suppression activities to protect lives, property, and ecosystem services, and natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan for California provides a vision for a natural environment that is more fire

resilient, buildings and infrastructure that are more fire resistant, and a society that is more aware of and responsive to the benefits and threats of wildland fire, all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2018). Plan goals include the following (CAL FIRE 2018):

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
3. Support and participate in the collaborative development and implementation of local, county, and regional plans that address fire protection and landowner objectives.
4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
6. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
7. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
8. Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

California Mutual Aid

The purpose of Emergency Management Mutual Aid is to provide emergency management personnel and technical specialists to support the disaster operations of affected jurisdictions during an emergency. In accordance with the California Master Mutual Aid Agreement, local and state emergency managers have responded in support of each other under a variety of plans and procedures. Immediately following the 1994 Northridge Earthquake, city and county emergency managers, along with the Coastal, Inland, and Southern Regions of the California Governor's Office of Emergency Services, developed Emergency Management Mutual Aid to provide a valuable service during the emergency response and recovery efforts at the Southern Region Emergency Operations Center, local emergency operations centers, the Disaster Recovery Center, local assistance centers, and in the field. Since that time, Emergency Management Mutual Aid has often been used to deploy emergency managers and other technical specialists not covered by law enforcement or fire mutual aid plans in support of emergency operations and response throughout California.

California Natural Disaster Assistance Act

The California Natural Disaster Assistance Act provides financial aid to local agencies to assist in the permanent restoration of public real property, other than facilities used solely for recreational purposes, when such real property has been damaged or destroyed by a natural disaster. The act is activated after a local declaration of emergency, after the California Emergency Management Agency gives concurrence with the local declaration, or after the governor issues a proclamation of a state emergency. Once the California Natural Disaster Assistance Act is activated, local government is eligible for certain types of assistance, depending on the specific declaration or proclamation issued.

State Fire Regulations

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code and include regulations concerning building standards (as also set forth in the CBC), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The state fire marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California.

Local

City of Moreno Valley General Plan

Parks and Public Services Element

The Parks and Public Services Element of the City of Moreno Valley General Plan 2040 (General Plan 2040) provides a framework for decision making and investment in public services within the City. The following goals and policies are identified in the Parks and Public Services Element and are applicable to the Project (City of Moreno Valley 2021c)[1]:

Goal PPS-3: Provide for responsive police and fire services that ensure a safe and secure environment for people and property.

Policy PPS.3-1: Provide responsive, efficient, and effective police services that promote a high level of public safety.

Policy PPS.3-2: Provide fire prevention and emergency response services that minimize fire risks and protect life and property, including fire prevention, fire-related law enforcement, and public education and information programs.

Policy PPS.3-3: Locate and maintain police and fire equipment, facilities, and staffing at locations and levels that allow for effective service delivery.

Policy PPS.3-5: Monitor the pace and location of development in Moreno Valley and coordinate the timing of fire station construction or expansion to the rise of service demand in surrounding areas.

Policy PPS.3-6: Continue to require that new development make a fair share funding contribution to ensure the provision of adequate police and fire services.

Policy PPS.3-7: Continue to engage the Police and Fire Departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for criminal activity and fire hazards and maximizes the potential for responsive police and fire services.

[1] The 2040 General Plan and related EIR were consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document.

Safety Element

The City of Moreno Valley General Plan Safety Element describes the potential natural and human-made hazards within the City. The following goals and policies identified in the Safety Element are applicable to the Project (City of Moreno Valley 2021a):

Policy S.1-12: Work to prevent wildland fire and to protect lives, property, and watersheds from fire dangers.

Policy S.1-13: Jointly with State, County, local and other agencies, inform property owners of wildfire risks and measures to reduce those risks.

Policy S.1-14: Require new development in Very High FHSZs to prepare a Fire Protection Plan that minimizes risks by:

- Assessing site-specific characteristics such as topography, slope, vegetation type, wind patterns etc.;
- Siting and designing development to avoid hazardous locations (eg. through fire breaks) to the extent feasible;
- Incorporating fuel modification and brush clearance techniques in accordance with applicable fire safety requirements and carried out in a manner which reduces impacts to environmentally sensitive habitat to the maximum feasible extent;
- Using fire-safe building materials and design features, consistent with the adopted Municipal Code and Fire and Building Code standards;
- Using fire-resistant landscaping; and
- Complying with established standards and specifications for fuel modification, defensible space, access, and water facilities

Policy S.1-15: Avoid, where feasible, locating new development in areas subject to high wildfire risk. If avoidance is not feasible, condition such new development on implementation of measures to reduce risks associated with that development.

Policy S.1-16: Require that all new development located in a Very High Fire Hazard Severity Zone (VHFHSZ) or a State Responsibility Area (SRA) is served by adequate infrastructure, including safe access for emergency response vehicles, visible street signs, and water supplies for fire suppression.

Policy S.1-17: Require new development in VHFHSZs to enter into a long-term maintenance agreement for vegetation management in defensible space, fuel breaks, and roadside fuel reduction.

Policy S.1-18: Continue to require proactive weed abatement, brush thinning, and removal services on new and existing development in High and Very High Fire Hazard Severity Areas in order to curb potential fire hazards.

Policy S.1-19: Cooperate with the Riverside County Fire Department and CAL FIRE to ensure that all portions of the Planning Area are served and accessible within an effective response time and to address regional wildfire threats.

Policy S.1-20: Work with responsible agencies and nongovernmental organizations to plan for post-fire recovery in a manner that reduces further losses or damages from future fires.

The City's prior 2006 General Plan goals and policies were also evaluated as part of Chapter 8 of the Aquabella Specific Plan Amendment (Appendix A).

Moreno Valley Fire Department Strategic Plan

The MVFD Strategic Plan identifies goals for Fire Operations, Fire Prevention, and Office of Emergency Management for the MVFD (MVFD 2011). The following goals are outlined in the plan:

Fire Operation Goals

- **Goal 1:** Financial Management and Accountability
- **Goal 2:** Arrive on Scene within 5 Minutes of Dispatch 90% of the Time
- **Goal 3:** Reduce the Risk of Fire to Residents through Prevention Campaigns and Mitigation Efforts
- **Goal 4:** Maintain a Strong Partnership with Riverside County Fire Department
- **Goal 5:** Ensure Fire Administration Staffing is Sufficient for the Needs of the Department

Fire Prevention Goals

- **Goal 1:** Fiscal Sustainability
- **Goal 2:** Ensure All Business and Commercial Occupancies Receive Annual Fire and Life Safety Inspections
- **Goal 3:** Perform Hazard Abatement Inspections Bi-Annually
- **Goal 4:** Provide Efficient Plan Review
- **Goal 5:** Evaluate Management Structure and Career Advancement within the Bureau

Office Of Emergency Management Goals

- **Goal 1:** Provide Training to Employees and Citizens
- **Goal 2:** Incorporate Federal and State Legal Mandates and Standards into City Emergency Management Strategies
- **Goal 3:** Continually Improve Emergency Operations Center Functions and Capabilities Based on a Comprehensive Assessment
- **Goal 4:** Manage FEMA and State Disaster Recovery Projects to Ensure Timely Completion of Required Documentation
- **Goal 5:** Maintain Effective Coordination and Partnerships with Local, Regional, and State Agencies

Draft Moreno Valley Local Hazard Mitigation Plan

The City's Draft 2022 Local Hazard Mitigation Plan (LHMP) is an update to the 2016 LHMP. The LHMP identifies the City's hazards, anticipates the likelihood of exposure to these hazards, and includes goals to help mitigate the risks from those hazards. The plan has four goals: protect life, property and the environment; provide public awareness; protect the continuity of government; and improve emergency management, preparedness, collaboration, and outreach (City of Moreno Valley 2022).

Moreno Valley Emergency Operations Plan

The Moreno Valley Emergency Operations Plan (EOP) is a preparedness document that provides guidance for City responses to emergency situations ranging from natural and human-made to technological disasters (City of Moreno Valley 2019). The EOP includes explanations of the concepts of emergency operation, resources to deploy during an emergency, and an analysis of threats to the City.

Moreno Valley Wildfire Mitigation Plan

Moreno Valley Electric Utility (MVU) has prepared and continually updates a Wildfire Mitigation Plan. The primary goal for the Wildfire Mitigation Plan is to describe the City's programs and practices and measures that effectively reduce the probability that the City's electric supply system could be the origin or contributing source for the ignition of a wildfire. MVU's entire electric supply system is located underground in conduit and vaults. Historically, underground electric lines have not been associated with catastrophic wildfires. The undergrounding of electric lines serves as an effective mitigation measure to reduce the potential for power-line ignited wildfires. Based on a review of local conditions and historical fires, MVU has determined that its electrical lines and equipment do not pose a significant risk of catastrophic wildfire. MVU takes appropriate actions to help its region prevent and respond to wildfire risk. In its role as a utility, MVU follows all applicable design, construction, operation, and maintenance requirements that reduce safety risks associated with its system.

Moreno Valley Municipal Code

Section 3.38.060 of the Moreno Valley Municipal Code requires the payment of impact fees for residential development projects, and Section 3.42.060 requires the payment of impact fees for commercial and industrial projects for the purpose of acquiring, designing, constructing, improving, providing, and maintaining, to the extent permitted by law, fire services facilities provided for in the City's General Plan and its adopted Capital Improvement Plan. Title 8 of the Municipal Code contains regulations that address fire protection. Chapter 8.36, California Fire Code, codifies the City's adoption of the California Fire Code.

4.20.3 Significance Criteria

The significance criteria used to evaluate Project impacts related to wildfire are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, for a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

1. Substantially impair an adopted emergency response plan or emergency evacuation plan
2. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
3. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
4. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Other applicable CEQA significance criteria encompass hazards, specifically, whether the Project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and whether it would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires (see CEQA Guidelines, Appendix G, Section IX). Further, CEQA Guidelines, Appendix G, Transportation, asks if the Project would result in inadequate emergency access (see CEQA Guidelines, Appendix G, Section XVII).

4.20.4 Impact Analysis

4.20.4.1 Summary of Previous Impact Analyses

1999 EIR

Analysis

The 1999 EIR did not analyze impacts related to wildfire because wildfire was not an environmental issue identified by the CEQA Guidelines when the analysis was prepared.

However, the 1999 EIR considered impacts related to fire protection and emergency response services in the public facilities and services section, finding that these impacts would be mitigated below significant levels through fair share contribution for fire services. The 1999 EIR described the site's conversion from agricultural to urban uses in an urban area. The 1999 EIR identified that while the proposed development would increase the potential for structural fires over the prior agricultural use, fire hydrants would be required to provide adequate fire suppression water flows, and project design considerations would be reviewed by the fire department at the development plan phase. In addition, fire department response times were found to be adequate.

Mitigation

No mitigation was identified related to the current wildfire criteria.

As discussed in Section 4.15, Public Services, of this Subsequent EIR, to reduce potential impacts to fire protection services, Mitigation Measure 17 was adopted, which required a fair share contribution toward an additional fire station and fire engine as conditions of approval of the Specific Plan or a development agreement. The 1999 EIR determined that, with the incorporation of Mitigation Measure 17, impacts to fire protection services would be less than significant.

2003 Supplemental EIR

Analysis

The 2003 Supplemental EIR did not analyze impacts related to wildfire because the supplemental documents specifically addressed traffic, biological mitigation, land use, and alternatives.

Mitigation

No mitigation was identified.

2005 Addendum

Analysis

At the time of the 2005 Addendum, wildfire risk was evaluated under the hazards and hazardous materials criteria. The 2005 Addendum determined that impacts to related to hazards and hazardous material would be consistent with those identified in the 1999 EIR.

Mitigation

No mitigation was identified.

4.20.4.2 Proposed Project Impact Analysis

Threshold 1: For a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

The Project is not located in or near an SRA or VHFHSZ. The term "near" is defined in this EIR to be approximately 100–200 feet (depending upon topography and other factors). The Project is situated approximately 0.5 miles from the nearest SRA and VHFHSZ. Nonetheless, this EIR evaluates this threshold for information purposes.

The City has two primary documents related to emergency and evacuation planning, the LHMP, revised May 2022, and the EOP, adopted March 2019. The LHMP identifies potential hazards, losses, and mitigation to limit losses as required by the federal Disaster Mitigation and Cost Reduction Act of 2000 (City Resolution No. 2017-55). The LHMP includes City evacuation routes (Figure 12-2 of City of Moreno Valley 2022) and updated mitigation strategies to mitigate the impacts associated with wildland and urban/structural fire hazards. The Project would not impair the execution of capital improvement projects and mitigation strategies. For further information regarding the LHMP, please refer to the plan itself, which is incorporated by reference and available for public inspection and review upon request to the City (City of Moreno Valley 2022).

The Project would introduce 43,050 permanent residents to the Project site, 34,664 of which were not previously accounted for in the 2005 Addendum. Approximately 43,050 new residents would be estimated to increase the number of vehicles evacuating the Project site during a wildfire-related emergency evacuation, which would increase the use of internal roadways and adjacent roadways that serve as access points for the Project site, which in turn has the potential to substantially impair emergency response plans or emergency evacuation plans. The Project would provide five vehicle access points as shown in Figure 3-3. The LHMP was developed using the estimated population of 219,640 people within the City in 2021. As of 2020, the population of the City was 208,838. Upon full buildout of the Project, it would exceed the estimated population used for the LHMP. In the event of an emergency that would require evacuation of the Project site and surrounding area, the increased number of people evacuating the Project site would potentially impair the use of the evacuation routes identified in the LHMP.

During construction of improvements, traffic lanes may need to be temporarily closed. Any Project construction activities that could potentially impact adjacent roadways, and thereby interfere with emergency access, would be subject to the City's Traffic Control Plan Guidelines & Checklist, including its Temporary Traffic Control Requirements (City of Moreno Valley 2022). The Project would not eliminate or permanently block any evacuation routes identified

in the LHMP. Rather, multiple road improvements would be provided with the Project, which would provide additional potential evacuation routes and improve existing conditions. New development implementing the Project would also be subject to review by MVFD to ensure adequate emergency access is maintained for each phase of development.

Further, the City required the applicant to complete a Wildfire Evacuation Plan for the Project to identify evacuation routes within the City and Project impacts on evacuation routes (Appendix N). Regional access to the Project site is provided via Interstate 215 and State Route 60, located approximately 4.15 miles west and 1.85 miles north from the Project site, respectively. As shown in Figure 4.20-4, Evacuation Routes, several potential evacuation routes are available to connect the Project site and the major transportation corridor within the City. Typically, fire and law enforcement officials will also identify evacuation points before evacuation routes are announced to the public. Evacuation routes are determined based on the location and extent of the incident and its spread rate and direction and include as many pre-designated transportation routes as possible. However, field conditions and shifting fire behavior may result in real-time changes to predetermined routes. Having additional evacuation route options is considered critical in these conditions. Evacuees are considered to reach a safe area once they are within the more densely urban areas such as the area west of North Alessandro Street. As discussed in Appendix N, Wildfire Evacuation Plan, the Project would add additional evacuees to existing evacuation routes, which could result in extended evacuation times for existing residents and visitors in the Project area. Neither CEQA nor the City has adopted numerical time standards for determining whether an evacuation timeframe is appropriate.

The Wildfire Evacuation Plan modeling assumed a worst-case scenario in which all vehicles belonging to households in the study area would be used in the evacuation, instead of the necessary number of vehicles needed to evacuate the impacted population. Using *Vissim*, a microscopic, multimodal traffic flow modeling software used to simulate different traffic conditions, it was determined that it would require 50 minutes to 1 hour and 9 minutes to evacuate the existing land uses (shown in Figure 4.20-5), and 2 hours and 24 minutes to evacuate just the proposed Project's population. As noted in Table 4.20-1, evacuation traffic generated by the Project would not significantly increase the average evacuation travel time or result in unsafe evacuation timeframes. Although there is a potential increase in evacuation times of up to 18 minutes for existing communities, it is anticipated that the longest evacuation times would be associated with the Project vehicles. In a likely evacuation scenario, existing residents east of the Project site would be located downstream of Project traffic because they are closer to the evacuation routes and destinations and would be able to evacuate prior to Project traffic reaching the same location.

Table 4.20-1. Evacuation Time Summary

Scenario	Total Evacuation Vehicles	Evacuation Time					
		Nearby Land Uses					Project
		A	B	C	D	E	
Scenario 1 – Existing Land Uses	10,461	1:09	1:07	0:50	1:05	0:57	N/A
Scenario 2 – Project Only	19,042	N/A	N/A	N/A	N/A	N/A	2:24
Scenario 3 – Existing Land Uses w/ Project	14,183	1:27	1:17	0:51	1:10	0:59	1:50
Scenario 4 – Existing Land Uses w/ Cumulative Projects	10,880	1:11	1:10	0:54	1:10	1:03	N/A
Scenario 5 – Existing Land Uses w/ Cumulative Projects w/ the Project	14,602	1:32	1:23	0:56	1:16	1:07	1:55

The analyzed timeframe is based on a very conservative scenario, where all residential populations are home and there is maximum occupancy at the Project. Actual evacuation times are expected to occur over a shorter time frame. Among the most important factors for successful evacuations in populated settings is control of intersections downstream of the evacuation area. If intersections are controlled by law enforcement, barricades, signal control, firefighters or other means, potential backups and slowed evacuations can be minimized. Another important aspect of successful evacuation is a managed and phased evacuation declaration. Evacuating in phases, based on vulnerability, location, or other factors, enables the subsequent traffic surges on major roadway to be smoothed over a longer time frame and can be planned to result in traffic levels that flow better than when mass evacuations include large evacuation areas at the same time.

The evacuation simulations conducted represent mass evacuations in the project vicinity to provide extremely worst-case scenarios. In a probable evacuation scenario, individuals in the existing surrounding land uses would have the opportunity to evacuate before the users of the Project even reach their vehicles in the parking structures, thereby giving priority to the existing land uses. The Incident Commander would direct a focused evacuation of zones situated near the wild urban interface, which are at higher risk. Areas that are not in immediate danger would likely not be provided with an evacuation notice initially and may be instructed to remain in place to prioritize the evacuation of vehicles from areas under direct threat. This would result in phasing evacuation traffic so that it flows more evenly and minimizes the surges that may slow an evacuation. Therefore, evacuation flow would be able to be effectively managed and would not likely lead to the mass evacuations scenarios that are shown above. Further, the Project would include the implementation of PDF-WF-1, which includes the implementation of an education program. The wildfire education program would help create additional awareness by occupants to reduce and/or avoid problems with an effective evacuation.

PDF-WF-1:

1. All developments within the Project site must include a proactive wildfire education program utilizing a multi-pronged approach to fire safety following the “Ready, Set, Go!” approach to wildfire evacuation, to include, but not limited to:
    a. Annual wildfire and evacuation safety awareness meeting in coordination with local fire agencies.
    b. Annual reminder notices will be provided to each employee encouraging them to review this wildfire education program and be familiar with evacuation protocols
    c. The development’s website will host a webpage dedicated to wildfire and evacuation education and awareness, which should include a copy of this wildfire education program and the resources provided herein.
2. All homeowners associations and property managers for developments within the Project site must designate Fire Safety Coordinators to oversee implementation of the wildfire education program. The Fire Safety Coordinators shall:
    a. Prepare and distribute the annual reminder notice that shall be provided to each occupant encouraging them to review this wildfire education program and be familiar with community evacuation protocols.
    b. Coordinate with local fire agencies to hold an annual fire safety and evacuation preparedness informational meeting for occupants. The meeting should be attended by representatives of appropriate fire agencies and important fire and evacuation information should be reviewed.

c. Maintain fire safety information on the development's website, including the wildfire education program and materials from the "Ready, Set, Go!" Program.

3. For non-residential uses, Fire Safety Coordinators shall also:
   a. Coordinate an annual fire evacuation drill/fire exercise to ensure proper safety measures have been implemented, facility awareness and preparation of a facility-wide "Ready, Set, Go!" plan. The Fire Safety Coordinator will also organize employee training and awareness through various practices:
      i. New hire fire awareness and evacuation training
      ii. Ongoing staff training
      iii. Facility sweeps by trained staff
   b. Strategically place fire safety and evacuation/sheltering protocol information.

Additionally, the City's EOP provides a framework for implementing well-coordinated emergency response and evacuations between many agencies, organizations, and jurisdictions. In the event of a wildfire or other emergency, agencies follow these plans and utilize experience, situational awareness, and available resources to move people from areas of higher risk to areas of lower risk. Law enforcement and fire agencies charged with managing evacuations would rely on the protocols established by the EOP and similar plans and guide evacuations considering numerous factors including wind speeds and direction, humidity, topography, fuel loading, emergency access routes, evacuation routes, time needed to evacuate, fire-hardening of structures (or lack thereof), and other variables. Specific evacuation or shelter-in-place directives would be issued consistent with the processes and protocols outlined in the City's and County's EOPs. Remote control of signal timing from the City's Traffic Management Center allows for real-time modifications to signal timing that can speed evacuation in the event of emergency. Approximately half of the traffic signals in the City are currently connected to the Traffic Management Center according to the 2040 General Plan, and the 2040 General Plan provides for the implementation of this technology in vulnerable areas as a priority going forward.

As identified in the EOP, within the City, MVPD is responsible for coordinating evacuation efforts. Impacts to police and fire protection services, which would include the ability of police and fire department to coordinate evacuation efforts within the City, were analyzed in Section 4.15, Public Services. Like with the original SP 218 and the 2005 Aquabella SPA, the continued adequacy of fire evacuation and emergency services will be ensured through the condition that the Project make a fair share funding contribution to the City consistent with the City's Municipal Code and Fee Schedule, Sections 3.38.060 and 3.38.070 of the Municipal Code, respectively, subject to any credits that may be given against such a fee for constructing facilities on site or elsewhere in the City. Fees will be used for acquiring, designing, constructing, improving, providing, and maintaining fire and police facilities. Development of fire stations and police stations/outposts in the City would be subject to review and approval by the City fire department as to sizing, location, and need. The City will identify fire facilities and service needs generated by the Project in connection with review of future implementing actions to ensure they are provided in a timely manner to meet the needs of the development phase. For further information, please refer to the City's EOP, which is incorporated by reference and available for public inspection and review upon request to the City (City of Moreno Valley 2019).

As described in Appendix N, given the lack of large areas of unmaintained fuels west of the Project site, an evacuation of the Project resulting from a fire would be highly unusual. Moreover, due to the reduced fire behavior during normal weather periods, the evacuation would not be expected to be large scale. Instead, most of the Project area population would be anticipated to remain at their locations and within their communities, with a more targeted

or phased evacuation being ordered, if needed. As concluded in Appendix N, the Project would not substantially impact evacuation from areas surrounding the Project site and Project residents would be informed of the best practices and procedures with implementation of PDF-WF-1. The Project would provide five points of ingress and egress and circulation on site that would connect existing roadways, which would provide additional opportunities for evacuation through the Project site for Project occupants and residents in the surrounding community. Further, the Project applicant would be required to pay development impact fees, which would assist MVPD in being able to provide police support for evacuation efforts. Impacts would be **less than significant**.

Threshold 2: For a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors?

As described above, the Project site is a relatively flat, previously graded site and is covered with non-native grasses. The Project site is not located in any responsibility area VHFHSZ (Figure 4.20-2). The Project site does not represent a significant fire risk, and it is located approximately 0.6 miles from WUI areas designated as High FHSZ and VHFHSZ to the southeast and east where the City abuts the Lake Perris State Recreation Area and the Bernasconi Hills.

The Project site is surrounded by urbanized residential, commercial, civic (school), and recreational uses, which are generally not associated with wildland fire hazards. Urban development, hardscape, irrigated vegetation (including golf courses), roadways, fuel management zones, and large master-planned communities like those located between the Project site and SRAs/VHFHSZs generally act as a fuel break that, together with firefighting efforts, slow or stop a fire's advancement into the community. The existing development, including roads, located between the Project site and the WUI area to the southeast are anticipated to act as fuel breaks that would stop or slow fire spread.

The Project would introduce up to a total of 15,000 multifamily housing units, a 49,000-square-foot mixed-use commercial and retail town center with a 300-room hotel; 80 acres of parks, comprising a 40-acre lake, a 15-acre lake promenade encircling the lake, and an additional 25 acres of parkland; 40 acres of schools with up to three elementary school sites and one middle school site; public services and facilities; infrastructure improvements; and other amenities to the Project site. As described in Section 4.14, Population and Housing, the Project would introduce approximately 43,050 new people to the Project site. The increased number of people residing at the Project site would increase the potential for accidental ignitions. Additionally, the Project would introduce new fuel sources to the Project site through the construction of new structures and the addition of landscaping.

While the Project would increase the likelihood of ignitions and the fuel load on the Project site, structures on the Project site would be required to comply with all current City and state fire code standards. These standards establish minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. Measures that are required by the CFC include but are not limited to construction safety measures, requirements related to access to the Project site, and specific water supply measures. There is existing development, including roads that are between the Project site and the WUI area to the southeast, that act as human-made areas with reduced fuel load, which act as barriers to stop or slow fire spread, also known as fuel breaks. The proposed lake system and proposed roadways on site, in addition to the roads surrounding the Project site, would provide additional fuel breaks between the Project site, surrounding development, and natural vegetation within Lake Perris State Recreation Area.

Pollutant concentrations or exposure from a wildfire event near the Project site could occur if the wildfire is not suppressed soon after it starts. Smoke released during a wildfire event can have a detrimental effect on air quality and lead to health risks from smoke inhalation. Risks associated with pollutants at the Project site would be similar to or less than those experienced across Southern California. The likelihood of fire ignition and spread on site would be reduced via development compliant with all current City and state fire code standards, installation of irrigated landscaping, provision of a lake complex, development of hardscape areas (including roadways and trails), and other Project features. The Project site is a flat, mostly graded property surrounded by existing development on all sides, which is not prone to wildfires and would not exacerbate risks from smoke inhalation. Development in the area includes existing roadways, hardscape, and irrigated landscapes, which would act as fuel breaks between the Project site and the WUI. Accordingly, the Project would not worsen the detrimental effect on air quality and health risks from smoke inhalation to users of the site or within the surrounding community.

As described above, the Project would result in a population increase at the Project site that have the potential to be exposed to pollutant concentrations from a wildfire event. In areas where the public might be experiencing wildfire smoke, the U.S. Environmental Protection Agency recommends that public health and air quality agencies provide advice on strategies to limit exposure, which include staying indoors, limiting physical activity, reducing indoor air pollution sources, effectively using air conditioners and air filters or cleaners, creating cleaner air shelters, and using respiratory protection appropriately. The most common advisory during a smoke episode is to stay indoors, where people can better control their environment. Whether at home or in a public space, indoor environments that have filtered air and climate control can provide relief from smoke and heat (EPA 2019).

While the Project site would increase the potential for ignition and fuels on the Project site, the Project site is surrounded by existing development on all sides, including existing roadways, which would act as fuel breaks between the Project site and the WUI area. Additionally, structures on the Project site would be required to comply with all current City and state fire code standards, which would reduce the likelihood of fire ignition and spread. As such, the Project would not represent a significant fire risk and would not exacerbate wildfire risk. Additionally, in the case of a wildfire, Project occupants would be advised on strategies to limit exposure by their local health and air quality officials to reduce exposure to pollutants. Impacts related to exposure of Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be **less than significant**.

Threshold 3: For a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project, would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

As stated above, the Project is not located in or near an SRA or VHFHSZ. The Project site is surrounded by development and therefore it would connect to existing infrastructure and utilities in the area. As shown in Figure 3-6, the Project would introduce new roads to the Project site. New roads constructed within the Project boundary would connect to John F. Kennedy Drive, Cactus Avenue, Lasselle Street, Oliver Street, and Iris Avenue. As described above, the Project site is surrounded by existing development and the Project would not introduce new roads adjacent to vegetated or open space areas. Additionally, roads constructed on the Project site would act as fuel breaks in the case of a fire.

As discussed in Section 4.19, Utilities and Service Systems, and shown in Figure 4.21-1, all wet and dry utility lines would connect to existing utility lines adjacent to the Project site. All electrical lines would be constructed underground, which reduces the potential for ignition on site compared to aboveground electrical lines. Construction of utility lines would temporarily increase fire risk due to the use of heavy machinery; however,

construction would be limited to a developed area and the Project would be required to comply with all fire code requirements associated with trenching, grading, site work, and the use of heavy machinery. Operation of utility infrastructure would be underground, within the Project site, and would not exacerbate fire risks. Additionally, the Project would include the construction of five lakes to manage drainage on the Project site. These lake features would act as fuel breaks and would reduce the fire risk on site.

The construction and operation of the proposed infrastructure would be in compliance with applicable state and local standards regulating fire risk. Due to the Project location being surrounded by existing development and roads, fuel breaks are not required. Project development and associated on-site infrastructure would not exacerbate fire risks. Temporary or ongoing impacts to the environment as a result of installation of associated infrastructure has been analyzed as part of the Project and disclosed throughout this Subsequent EIR and appropriately mitigated to reduce impacts. Installation or maintenance of associated infrastructure would not exacerbate fire risk or result in temporary or ongoing impacts to the environment beyond those already disclosed in this Subsequent EIR; therefore, impacts would be **less than significant**.

Threshold 4: For a project located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As stated above, the Project is not located in or near an SRA or VHFHSZ. The Project would introduce multifamily housing units; mixed-use commercial and retail town center; parks, including a lake; school facilities; public services and facilities; and new people and structures to the Project site.

Wildfires have the potential to result in secondary impacts or after-effects due to the exposure of bare ground and loss of vegetation, such as flooding, slope instability, post-fire runoff, or drainage changes. These effects often occur on sites with steep slopes but may also include increased sedimentation that could negatively impact downstream drainages.

As discussed in Section 4.10, Hydrology and Water Quality, the Project site was partially graded to previous drainage design plans in 2006 and remains relatively unchanged. Runoff from the Project site drains south into an existing channel and off-site flow is conveyed by an existing storm drain that runs through Nason Street. The Project proposes to alter the drainage of the Project site to drain to lakes on the Project site. The lakes would be built with enough storage capacity to capture and detain all runoff volume from a 100-year storm (Appendix H). The detained runoff would begin to discharge immediately; the discharge rate of water leaving the lakes would be significantly lower than the discharge rate of water from the Project land surfaces into the lakes. Lake spillway structures would be designed to reduce peak flow rates and reduce peak discharges to not exceed pre-Project peak discharges. As concluded in Section 4.10, peak discharge would not exceed predevelopment conditions.

As discussed in Section 4.7, Geology and Soils, the Project site has been previously graded and is relatively flat with gentle sloping topography. As concluded in the geotechnical report (Appendix C), hazards related to landslides are considered low to negligible with adherence to CBC requirements. As discussed in Section 4.7, the proposed changes to the Project would not affect the potential for landslides at the site, which would be reduced to less than significant with adherence to building code requirements.

As previously discussed, the Project site would increase the potential for ignition and fuels on the Project site; however, the Project site is surrounded by existing development on all sides and would not represent a significant fire risk. Given that the Project would not increase risks of flooding or landslides on site and the Project does not

represent a significant fire risk, impacts related to exposure of people to significant risks related to runoff, post-fire instability, or drainage changes would be **less than significant.**

Other Applicable Significance Criteria

As stated above, other applicable CEQA significance criteria encompass hazards, specifically, whether the Project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and whether it would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires (see CEQA Guidelines, Appendix G, Section IX). Further, CEQA Guidelines, Appendix G, Transportation, asks if the Project would result in inadequate emergency access (see CEQA Guidelines, Appendix G, Section XVII). This subsection addresses these additional significance criteria.

First, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency excavation plan, as discussed in Threshold 1. For further information, please refer to the Project Wildfire Evacuation Plan (Appendix N).

Second, the Project would not result in inadequate emergency access for the reasons discussed in Threshold 1 (see also Section 4.17, Transportation, of this SEIR).

Third, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. See Threshold 4 for information. As stated, the Project site is not located within an SRA or a high, very high, or extreme fire hazard severity zone. Accordingly, neither CAL FIRE nor the City identify the Project site as being within an area susceptible to wildland fires. The Project site consists of flat, graded land located in an urbanized infill area. These site characteristics are not associated with increased wildland fire risk.

The Project site is also surrounded by urbanized residential, commercial, civic (school), and recreational uses, which are generally not associated with wildland fire hazards. Urban development, hardscape, irrigated vegetation (including golf courses), roadways, fuel management zones, and large master-planned communities like those located between the Project site and SRAs/VHFHSZs generally act as a fuel break that, together with firefighting efforts, stop or slow a fire's advancement into a community. The existing development, including roads, located between the Project site and the wildland/urban interface area to the southeast are anticipated to act as fuel breaks that would stop or slow fire spread.

The Project would involve the conversion of a graded site with minimal fuels to highly ignition-resistant structures and maintained urbanized landscapes and hardscapes. Like with the original SP 218 and the 2005 Aquabella SPA, structures on the Project site would be required to comply with all current City and state fire code standards. These standards establish minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. Measures that are required by the California Fire Code include, but are not limited to, construction safety measures, requirements related to access to the Project site, requirements for ignition-resistant structures and materials, interior fire sprinklers, and specific fire flow requirements (water supply and pressure). The proposed lake system, irrigated vegetation, and proposed roadways on site, in addition to the roads surrounding the Project site, provide additional fuel breaks between the Project site, surrounding development, and natural vegetation within Lake Perris Recreation Area.

Like with the original SP 218 and the 2005 Aquabella SPA, the Project would introduce residents to the Project site above existing conditions, which would increase the potential for accidental ignitions at the Project site. However, the implementation of fire protection and prevention measures, discussed above, would create an ignition-resistant landscape meeting strict code requirements that would prevent or minimize fire spread. Further, as discussed in Section 4.15, Public Services, prompt firefighter response is available to the Project site and will continue to be assured through fair-share payments pursuant to the City's Municipal Code and Fee Schedule, subject to any credits given against constructing facilities on site or elsewhere in the City. Thus, the Project is not anticipated to result in increased frequency, duration, or size of wildfires, or additional exposure of people or structures to wildfires; impacts would be **less than significant**.

4.20.5 Significance of Impacts Before Mitigation

Threshold 1: Impair an Emergency Plan

Impacts would be **less than significant**.

Threshold 2: Expose Occupants to Pollutants or Uncontrolled Spread

Impacts would be **less than significant**.

Threshold 3: Require Infrastructure that May Exacerbate Risk

Impacts would be **less than significant**.

Threshold 4: Expose People or Structures to Significant Risks

Impacts would be **less than significant**.

Other Applicable Thresholds: Emergency Response and Evacuation Plans and Exposure of People or Structures to Significant Risks

Impacts would be **less than significant**.

4.20.6 Mitigation Measures

4.20.6.1 Previously Adopted Mitigation Measures

1999 EIR

No mitigation was identified.

2003 Supplemental EIR

No mitigation was identified.

2005 Addendum

No mitigation was identified.

4.20.6.2 Project Mitigation Measures for the 2024 Subsequent EIR

Impacts would be less than significant and no mitigation is required.

4.20.7 Significance of Impacts after Mitigation

Threshold 1: Impair an Emergency Plan

Impacts would be **less than significant**.

Threshold 2: Expose Occupants to Pollutants or Uncontrolled Spread

Impacts would be **less than significant**.

Threshold 3: Require Infrastructure that May Exacerbate Risk

Impacts would be **less than significant**.

Threshold 4: Expose People or Structures to Significant Risks

Impacts would be **less than significant**.

Other Applicable Thresholds: Emergency Response and Evacuation Plans and Exposure of People or Structures to Significant Risks

Impacts would be **less than significant**.

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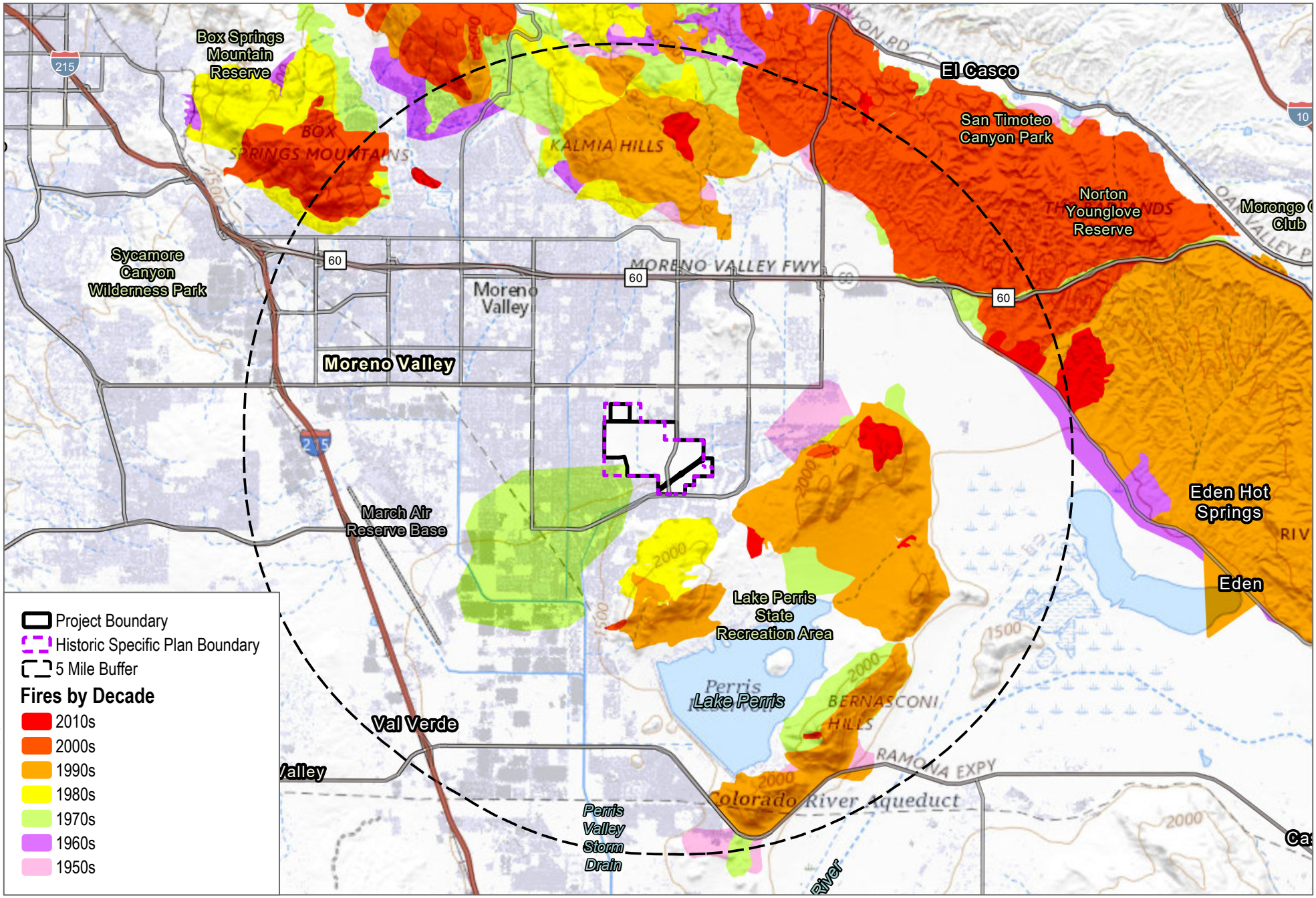

SOURCE: USGS National Map 2023; CalFIRE 2022

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0 4,500 9,000 Feet

FIGURE 4.20-1

Wildfire Histroy

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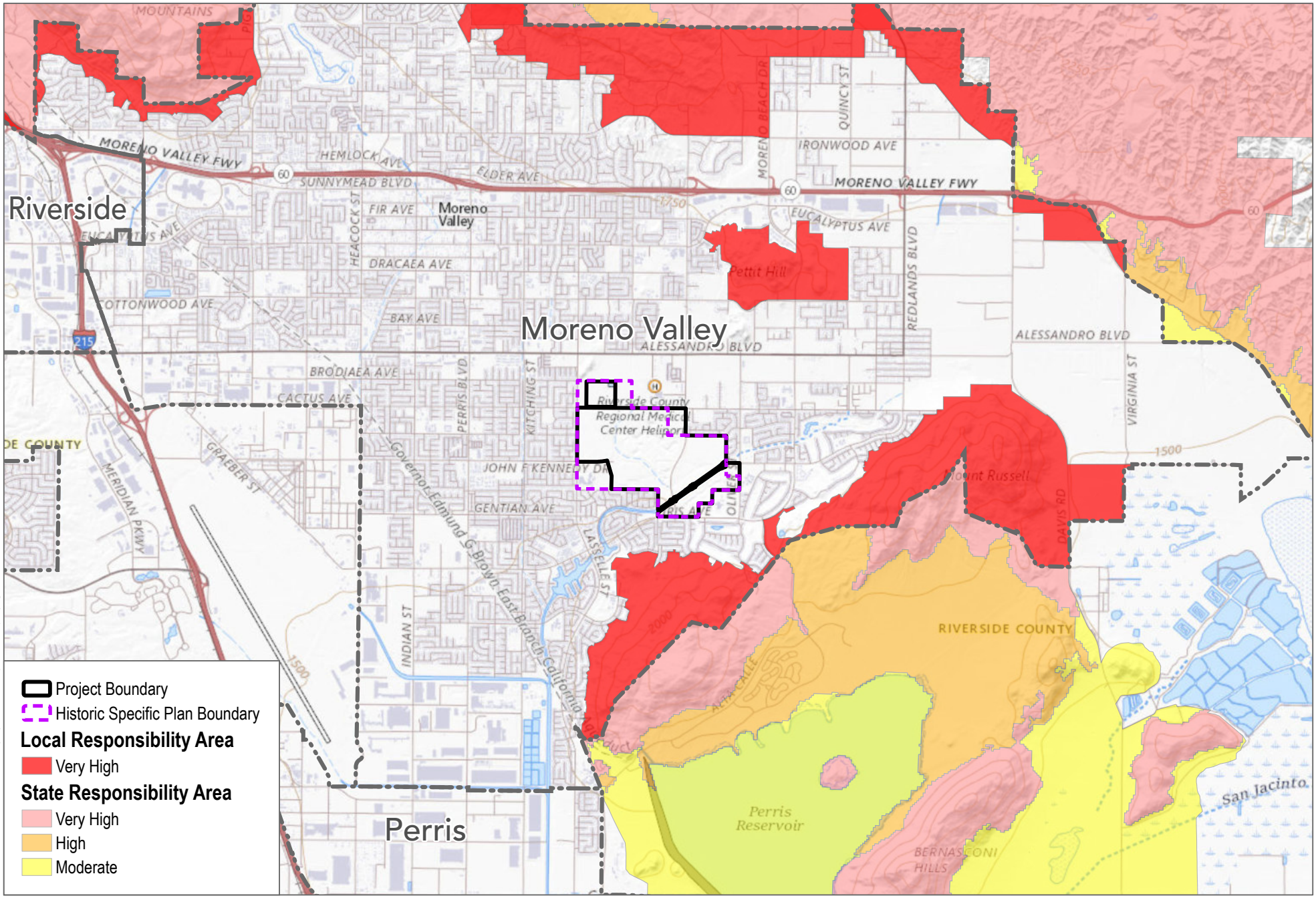

SOURCE: USGS National Map 2023; CalFIRE 2022

FIGURE 4.20-2

Very High Fire Hazard Zone SRA and LRA 2007

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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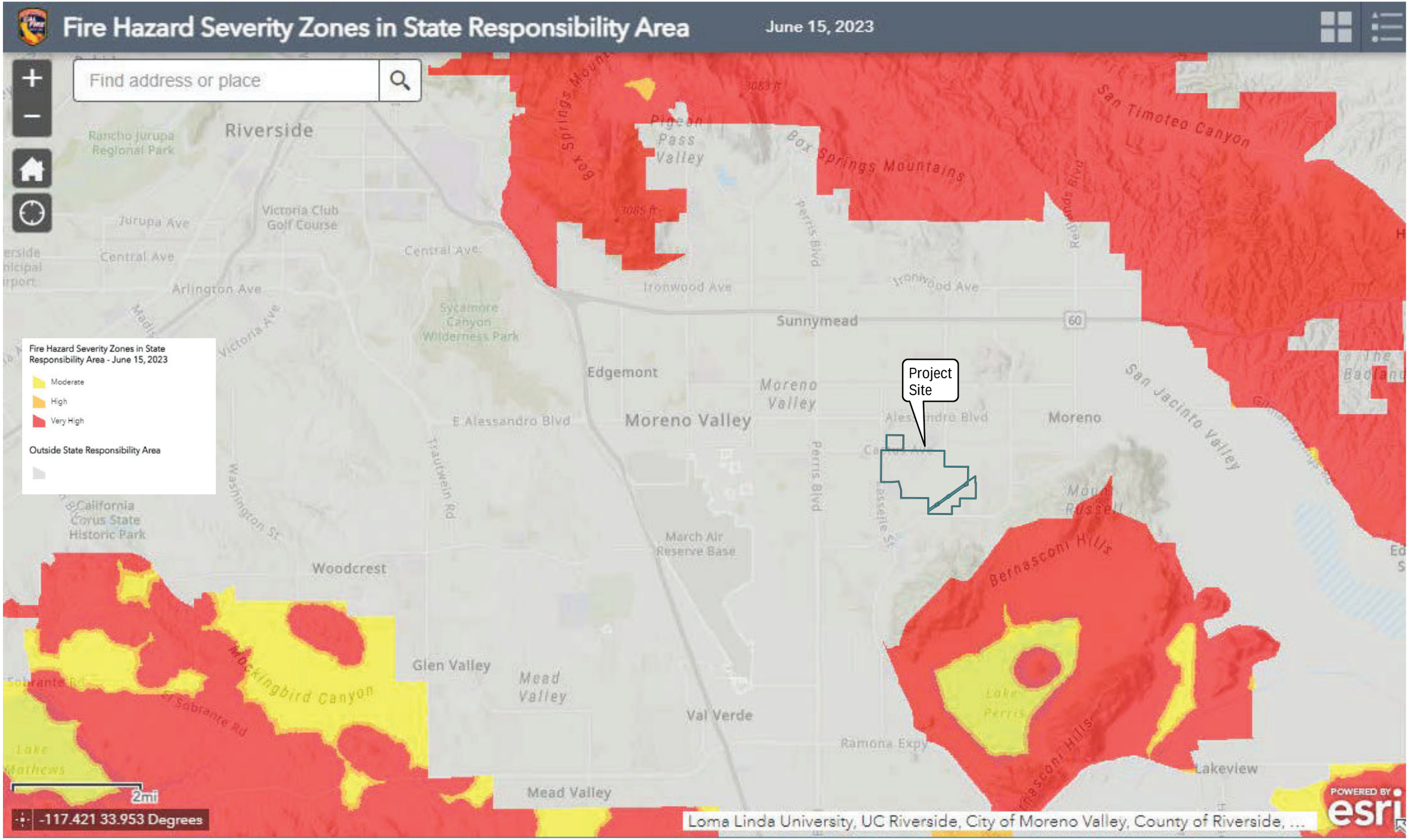

SOURCE: CAL FIRE WEBSITE, ACCESSED 9/28/2023

FIGURE **4.20-3**
Very High Fire Hazard Zone SRA Only (Draft June 2023) 2023
Aquabella Specific Plan Amendment SEIR

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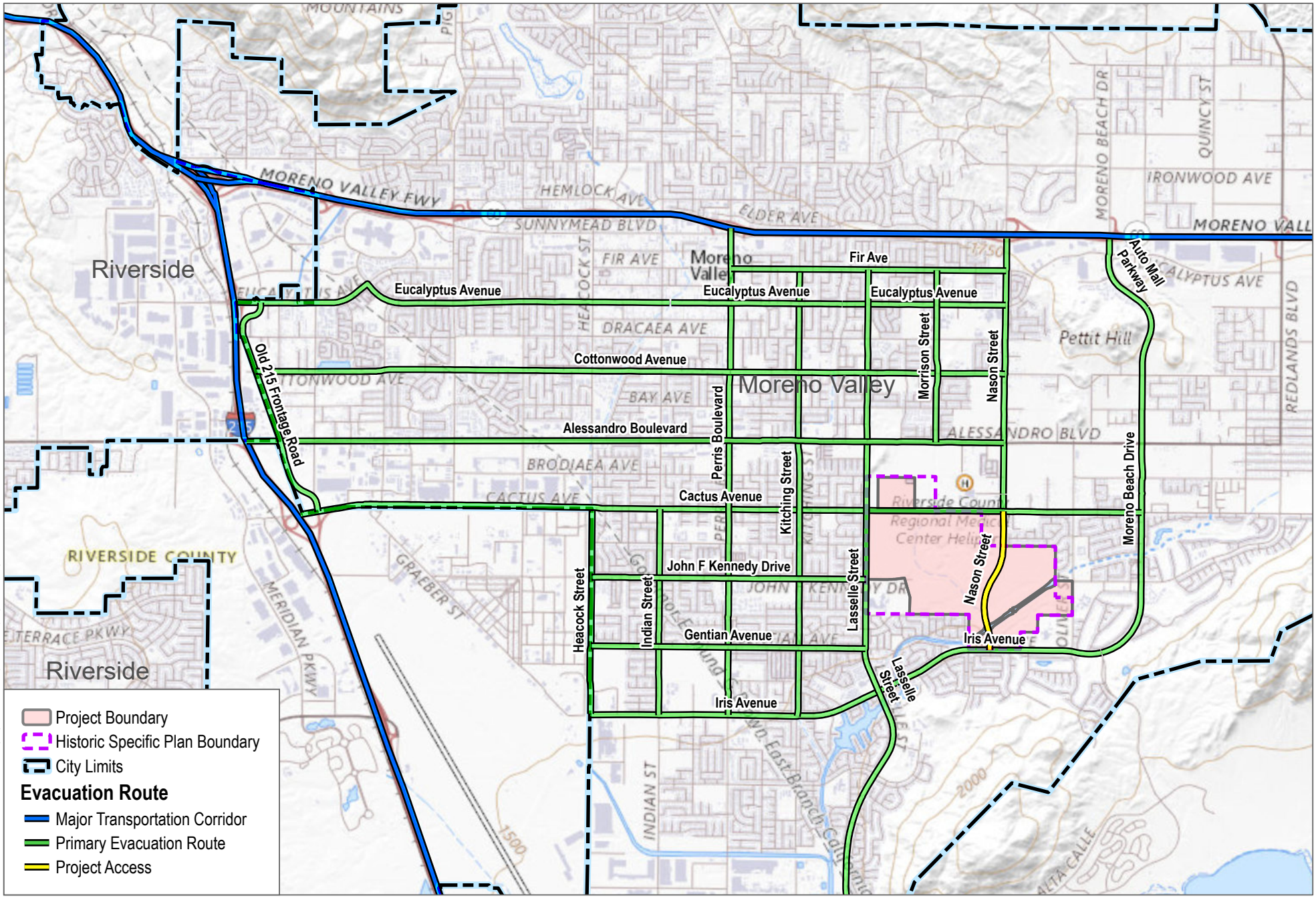

SOURCE: USGS National Map 2023

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0 2,000 4,000 Feet

FIGURE 4.20-4

City of Moreno Valley Evacuation Routes

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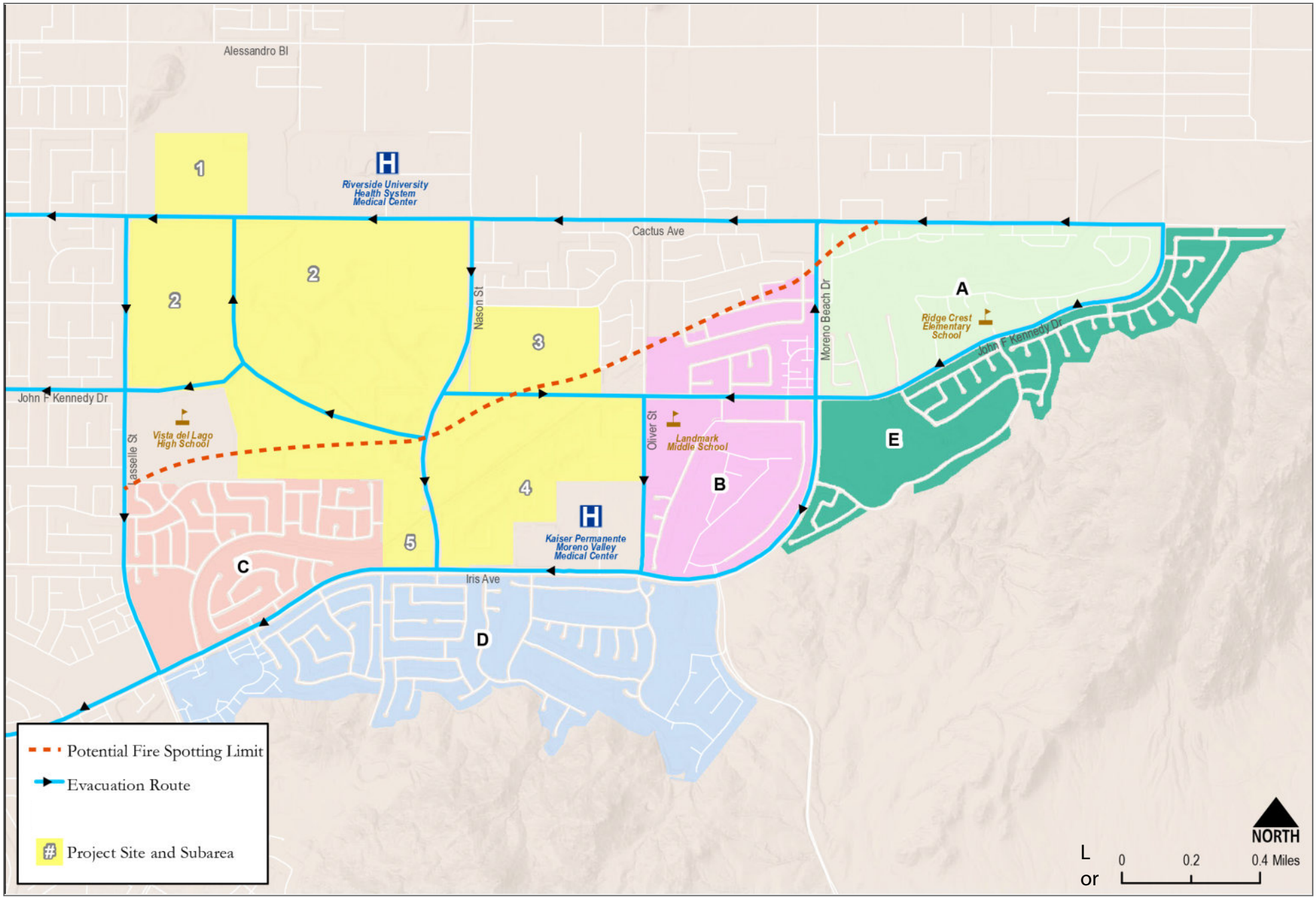

SOURCE: C+R 2023

FIGURE 4.20-5

Project Site and Surrounding Area Evacuation Routes

Aquabella Specific Plan Amendment SEIR

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5 Cumulative Effects

This chapter addresses the cumulative impacts of the Aquabella Specific Plan Amendment Project (Project). Section 15130(a) of the CEQA Guidelines requires that an EIR address the cumulative impacts of a project when the project's incremental effect would be cumulatively considerable. Cumulatively considerable means that the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section 15065[a][3]). Section 15355 of the CEQA Guidelines defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period of time. For an incremental effect that is not cumulatively considerable, and the impact is not considered significant, the EIR is to briefly describe the basis for its conclusion (CEQA Guidelines Section 15130[a]).

5.1 Cumulative Impact Approach

According to Section 15130(b) of the CEQA Guidelines, the discussion of cumulative impacts "…need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness." Section 15130 identifies two basic methods for establishing a project's cumulative environment:

1. A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
2. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated region- or area-wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

With the exception of the impact analyses of air quality, greenhouse gas emissions, and transportation, this cumulative analysis uses the "list" approach to identify the cumulative setting. The cumulative impacts of air quality and greenhouse gas emissions have been evaluated using the summary of projections method because the geographic scope of such impacts tends to be broad and area-wide.

5.2 Cumulative Projects

The effects of past and present projects on the environment are reflected by the existing conditions in the Project area. Probable future projects are those in the Project vicinity that have the possibility of interacting with the Project in a manner that may create a cumulative impact, based on factors such as proximity and construction schedule. These projects are considered "probable" and sufficiently crystallized for purposes of this cumulative impact analysis where, by the date the recirculated Notice of Preparation (NOP) was posted, it has met one of the following standards:

- The project is partially occupied or under construction,
- The project has received final discretionary approvals,

- The project has an application(s) accepted as complete by local agencies and is currently undergoing environmental review, or
- The project has been discussed publicly by an applicant or otherwise become known to a local agency and has provided sufficient information about the project to allow for a meaningful analysis of cumulative environmental impacts.

The City has established the date the recirculated NOP was posted – October 26, 2023 – as the cutoff date for determining what projects to include in the analysis. The physical conditions existing when the notice of preparation is published normally are used to establish the baseline for cumulative impacts (CEQA Guidelines Section 15125[a][1], *South of Market Community Action Network v. City and County of San Francisco* [2019] 33 Cal.App.5th 321, 337). Such a cutoff date is reasonable and necessary to preclude the need for continual reanalysis whenever a new project enters the environmental review pipeline.

Geographic Scope

Section 15130(b)(3) of the CEQA Guidelines states that "lead agencies shall define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used." The geographic area that could be affected by a project varies depending on the type of environmental resource being considered. When the effects of a project are considered in combination with those of other past, present, and probable future projects to identify cumulative impacts, the other projects that are considered may also vary depending on the type of environmental effects being assessed. Table 5-1 presents the general geographic areas associated with the different resources addressed in this cumulative analysis. For purposes of this analysis and where not otherwise stated, the broader geographic categories encompass the narrower categories, such that regional scope includes local and immediate vicinity projects, and local scope includes immediate vicinity projects.

Table 5-1. Geographic Scope and Method of Evaluation for Cumulative Projects

Environmental Resource	Geographic Scope	Method of Evaluation
Aesthetics	Immediate Vicinity	List of Projects
Agricultural Resources	Regional and Local	List of Projects
Air Quality (Toxic Air Contaminants; Odors)	Immediate Vicinity	List of Projects
Air Quality (Construction/Operational Sources)	South Coast Air Basin/region	Summary of Projections
Biological Resources	Immediate Vicinity	List of Projects
Cultural Resources	Regional and Local	List of Projects
Energy	State/region	List of Projects
Geology and Soils	Immediate Vicinity and Local	List of Projects
Greenhouse Gas Emissions	South Coast Air Basin	Summary of Projections
Hazards and Hazardous Materials	Immediate Vicinity	List of Projects
Hydrology and Water Quality	Watershed and Groundwater Basin	List of Projects
Land Use and Planning	Regional and Local	List of Projects
Mineral Resources	Regional and Local	List of Projects
Noise (On-Site Construction and Operations Noise, Off-site Traffic Noise)	Immediate Vicinity and Local	List of Projects
Population and Housing	Regional and Local	List of Projects

Table 5-1. Geographic Scope and Method of Evaluation for Cumulative Projects

Environmental Resource	Geographic Scope	Method of Evaluation
Public Services	Local and Regional	List of Projects
Recreation	Local and Regional	List of Projects
Transportation	Local and Regional	Summary of Projection and List of Projects
Tribal Cultural Resources	Regional and Local	List of Projects
Utilities and Service Systems	Local and Regional	List of Projects
Wildfire	Immediate Vicinity	List of Projects

Cumulative Projects

The following list of projects is based on the information provided in the Traffic Analysis Report (Appendix K3). The cumulative project list was developed for the purposes of this EIR analysis to include key projects in the City of Moreno Valley and adjacent jurisdictions. Table 5-2 presents the cumulative projects surrounding the Project site. The projects listed in Table 5-2 serve as the foundation on which the cumulative analysis approach has been based. Figure 5-1, Cumulative Project Location Map, shows geographically where the projects listed in Table 5.2 are located.

Table 5-2. Cumulative Project List

ID	Project Name	Land Use Type(s)	Quantity	Units[1]	Location	Cumulative Context
1	Crystal Cove Apartments	Multifamily Housing (Low-Rise)	192	DU	southwest of Alessandro Blvd and Lasselle St (APN 484-030-028)	Local
2	World Logistics Center	High-Cube Logistics Center	40,400.000	TSF	2,610 acres in the Rancho Belago area	Local
		Light Logistics	200.000	TSF		
		SCG Valve/Metering Station	0.150	TSF		
		SDG&E Gas Compression Station	30.800	TSF		
		Fire Station	1	Site		
		Gas Station w/Market	12	VFP		
		Convenience Store	3.0	TSF		
3	Town Center at Moreno Valley SP	Single Family Housing	800	DU	Bound by of Cottonwood Ave, Nason St, and Alessandro	Local
		Parks	4.8	AC		
		Hotel	106	RM		
		Office	15.0	TSF		

Table 5-2. Cumulative Project List

ID	Project Name	Land Use Type(s)	Quantity	Units[1]	Location	Cumulative Context
		Public Library	30.0	TSF	Blvd (APNs 487-470-030 and 487-470-031)	
		High Turnover Sit-down Restaurant	16.660	TSF		
		Fast Food Restaurant w/Drive-thru	3.5	TSF		
		Retail	60.890	TSF		
		Supermarket	45.000	TSF		
4	Moreno Valley Elementary School	Elementary School	950	STU	13700 Nason Street	Local
5	Village at Moreno Valley	Gas Station w/ Market	18	VFP	northwest corner of Nason St and Fir Ave (APNs 487-250-005, -06, -07, -10, and -13)	Local
		Retail	33	TSF		
		Fast Food Restaurant w/ Drive Thru	9.956	TSF		
		Fast Food Restaurant w/o Drive Thru	4.5	TSF		
		High Turnover Sit-Down Restaurant	4.5	TSF		
6	Discovery Residential	Single Family Detached Residential	67	DU	northeast of Oliver St and Brodiaea Ave (APN 486-240-010)	Local
7	Moreno Beach Gas Station	Gas Station w/ Market	16	VFP	Southwest corner of Moreno Beach Dr and Alessandro Blvd	Local
8	Flamingo Apartments	Multifamily Housing (Low-Rise)	88	DU	bounded by Alessandro Blvd and Copper Cove Ln (APNs 484-030-026 and 484-030-013)	Local
9	Northwest Commercial Center	Gas station	16	VFP	Northwest corner of Alessandro Blvd and Lasselle St	Local
		Convenience Store	3.825	TSF		
		Fast Food Restaurant w/ Drive Thru	6.64	TSF		

Table 5-2. Cumulative Project List

ID	Project Name	Land Use Type(s)	Quantity	Units[1]	Location	Cumulative Context
		High-Turnover Sit-Down Restaurant	7.25	TSF	(APN 479-631-010)	
		Shopping Center	3.20	TSF		
		General Office Building	9.90	TSF		
		Car wash	3.85	TSF		
		Bank w/ Drive-Thru	3.775	TSF		
10	Sunset Crossings	Single Family Detached Residential	108	DU	between Alessandro Blvd, Nason St, Cottonwood Ave, and Oliver St (APNs 488-210-020 and 488-210-006)	Local
11	Beyond Food Mart Oliver and Iris	Fueling Stations	16	VFS	27990 Iris Ave, Moreno Valley, CA	Local
		Convenience Store	7.460	TSF		
		Drive-Thru Carwash	1.790	TSF		
12	First Industrial Warehouse at Day Street	Industrial Warehouse	164.968	TSF	14050 Day St, Moreno Valley, CA	Local
13	Valley Gardens Apartments	Two- and Three-bedroom Apartments	64	DU	northwest corner of Alessandro Blvd and Sarah St (APN 906-080-18)	Local
		Office and Mail Room	0.747	TSF		
		Open Space	86.302	TSF		
14	Cottonwood Collection	Single-Family Residential	55	DU	northwest of Cottonwood Ave and Quincy St (APN 479-250-001)	Local
15	Moreno Valley Business Park Building 5	Light Industrial	212.313	TSF	southeast of Ironwood Ave at Heacock St	Local
16	Belago Park	Single-Family Residential	310	DU	northwest of Redlands Blvd and Cactus Ave: APNs 478-100-035, 478-100-012; 478-110-001,	Local

Table 5-2. Cumulative Project List

ID	Project Name	Land Use Type(s)	Quantity	Units[1]	Location	Cumulative Context
					-002, -003, -004, -005, -006, -007;478-120-001, -002, -005, -006 and 478-120-025.	
17	Gateway Heights	Detached Townhouse Condominium	108	DU	north of Jennings Ct and east of Morton Rd (APN 256-150-001)	Local
18	Cottonwood & Edgemont Project	Light industrial buildings	99.630	TSF	east side of Old 215 Frontage Rd (APNs : 263-190-012, -014, -015, -016, -017, -018, -019, -036)	Local
19	Sunnymead S6 Hotel	Hotel	94	RM	North of Sunnymead Blvd, west of Indian St (APNs 481-101-033 and 481-101-038)	Local
20	Moreno Valley Mall Redevelopment	Retail	1,128.702	TSF	Moreno Valley Mall, excluding Macy's and JCPenney	Local
		Office	60	TSF		
		Hotel	270	RM		
		Residential	1,627	DU		
		Plaza/Open Space	1.9	AC		
21	Perris at Pentecostal	Apartment Complex	426	DU	northeast corner of Iris Ave and Emma Ln	Local
22	Heacock Logistics Parking Lot	Parking Lot	9.14	AC	East of Heacock St and north of the Perris Valley Storm Drain (APN 316-211-014)	Local
23	Moreno Valley Business Center	Light Industrial	164.187	TSF	northeast corner of Alessandro	Local

Table 5-2. Cumulative Project List

ID	Project Name	Land Use Type(s)	Quantity	Units[1]	Location	Cumulative Context
					Blvd and Day St (APNs 291-191-007 through -013, and -025 through -029)	
24	Heacock Commercial Center	Warehouse	873.967	TSF	bound by Gentian Ave to the north and Heacock St to the west (APNs 485-230-027, 485-230-028, 485-230-030, 485-230-031, 485-230-032, and 485-230-033)	Local
25	Cactus Avenue and Nason Street Commercial Office and Retail Development	Food Drive-Thru Buildings	5.810	TSF	northeast corner of Cactus Ave and Nason St (APN 486-290-038)	Immediate Vicinity
		Retail/Restaurant	8.0	TSF		
		Convenience Store	3.995	TSF		
		Fueling Station	18	VFP		
		Medical Office Buildings	32.0	TSF		
		Mixed Office Building	40.0	TSF		
26	Tract 36933	Single Family Housing (50%)	138	DU	Southwest of Auto Mall Pkwy and Eucalyptus Ave	Local
27	Tract 31618	Single Family Housing	56	DU	Northwest of Moreno Beach Dr and Alessandro Blvd	Local
28	Tract 32408	Single Family Housing	80	DU	Southwest of Moreno Beach Dr and Cottonwood Ave	Local
29	Tract 31590	Single Family Detached Residential	96	DU	Southwest of Moreno Beach Dr and	Local

Table 5-2. Cumulative Project List

ID	Project Name	Land Use Type(s)	Quantity	Units[1]	Location	Cumulative Context
					Alessandro Blvd	
30	Rocas Grandes II	Multifamily Housing (Low-Rise)	460	DU	Southeast corner of Alessandro Blvd and Lasalle St	Immediate Vicinity
31	Tract 38123	Single Family Housing	195	DU	Northeast corner of Alessandro Blvd and Lasalle St	Local
32	Tract 38236	Single Family Detached Residential	204	DU	Southwest corner of Alessandro Blvd and Oliver St	Local
33	Rancho Bella Vista Specific Plan	Single Family Detached Residential	745	DU	Northeastern corner of Moreno Beach Dr and Cottonwood Ave	Local
34	PM 37942 7 Commercial Lots	Medical-Dental Office	32.0	TSF	Northeast corner of Cactus Ave and Nason St.	Local
		General Office	40.0	TSF		
		Gas Station w/ Market	12	VFP		
		Fast Food with Drive Thru	5.600	TSF		
		High-Turnover Sit-Down Restaurant	3.500	TSF		
		Retail	4.500	TSF		
35	TTM 38443	Single Family Detached Residential	133	DU	South Cottonwood Ave	Local
36	Kaiser	Hospital Expansion[2]	N/A	N/A	27300 Iris Avenue, Moreno Valley, California	Immediate Vicinity
37	Alessandro Walk	Single Family Detached Residential	227	DU	North of Alessandro Boulevard, south of Bay Avenue, east of Volga Lane,	Local
		Office	3,150	TSF		

Table 5-2. Cumulative Project List

ID	Project Name	Land Use Type(s)	Quantity	Units[1]	Location	Cumulative Context
					west of Nason Street	
38	Nason Marketplace	Hotel	84	RM	Nason St	Local
		Gas Station w/ Market	16	VFP		
		Retail	24.547	TSF		
		Coffee Shop w/ Drive thru	3.059	TSF		
39	Rocas Grandes	Multifamily Housing (Low-Rise)	420	DU	Southeast corner of Alessandro Blvd and Lasalle St	Immediate Vicinity

Source: Appendix K3; City of Moreno Valley 2023.
Notes:
1 DU = dwelling units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Position; STU = Students; RM =Rooms; AC = Acres
2 Source: Kaiser Permanente Moreno Valley Medical Center Master Plan Traffic Impact Analysis (October 2019). Prepared by LSA

5.3 Cumulative Impact Analysis

For purposes of this EIR, the Project would result in a significant cumulative effect if:

- The cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the Project is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or
- The cumulative effects of related projects (past, current, and probable future projects) are already significant and implementation of the Project makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

This cumulative analysis assumes compliance with applicable regulations and that all mitigation measures identified in Chapter 4 to mitigate Project impacts are adopted. The analysis herein analyzes whether, after adoption of Project-specific mitigation, the residual impacts of the Project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the Project) cumulatively significant effects. Where the Project would contribute to a cumulatively significant effect, additional mitigation is recommended where feasible.

While not required by CEQA, environmental resources that were determined to have no impact from the Project are briefly included in this cumulative impact analysis. The Project was determined to have no impact on Mineral Resources, as well as several thresholds within other environmental resource analyses (see Chapter 4 of this SEIR). Where the Project would result in no impact in these categories, it would similarly not result in a cumulatively significant impact.

5.3.1 Aesthetics

Projects contributing to cumulative visual effects include those in the immediate vicinity of the Project, where the viewer is most likely to observe the Project and surrounding uses.

Threshold 1: Impacts to Scenic Vistas

As described in Section 4.1, Aesthetics, development of the Project would result in similar impacts as prior project approvals to scenic vistas, and impacts would be less than significant. The City of Moreno Valley General Plan 2040 (2040 General Plan)[1], does not identify scenic vistas or vantage points. However, the SEIR analyzed the potential for the Project to block views to local and regional landforms. The individual analysis concludes the Project would block existing views to the Bernasconi Hills, San Bernardino Mountains, and the Badlands from foreground vantage points located on public roads adjacent to the Project site in a similar, less than significant manner when compared to impacts disclosed with the 2005 Aquabella Specific Plan Amendment.

The list of cumulative projects in Table 5-2 contains a mix of residential, commercial, institutional, industrial and mixed-use projects located on undeveloped parcels within the urban areas of the City. Several projects have views of scenic resources within the City; however, due to intervening terrain, project setbacks, and existing structures of similar size and scale, views of the scenic resources with these cumulative projects, taken together with the Project, would be less than significant. The analysis of the World Logistics Center (ID 7) identified cumulative impacts may result from its implementation together with other projects related to changes to the views for travelers on SR-60, Gilman Springs Road, Redlands Boulevard, Theodore Street, and Alessandro Boulevard. However, the Project does not impact views from motorists along these routes. Therefore, the Project would not contribute to cumulative impacts to scenic vistas within the City. **Impacts would not be cumulatively considerable.**

Threshold 2: Impacts to Resources within a State Scenic Highway

The nearest eligible scenic highway, SR-74 between Interstate (I) 5 and Blackburn Road, is located approximately 8 miles to the south of the Project site. The closest officially designated scenic highway, SR-243, is located over 18 miles to the east of the Project site. Given that the Project is not located in proximity to a state scenic highway, the Project would not contribute a potential cumulative impact to state scenic highways. **Impacts would not be cumulatively considerable.**

[1] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

Threshold 3: In Urbanized Area, Conflict with Policies Governing Scenic Quality

With the approval of the GPA and rezone of the 10-acre parcel on the Project site, the Project would not conflict with the applicable zoning regulations and policies governing scenic quality. The Project's consistency with 2040 General Plan policies is discussed in Table 4.11-1.

Despite several projects requiring a general plan amendment or zone change, the Project and cumulative projects would result in less than significant cumulative impacts through development consistent with the surrounding land uses and conformance with applicable development standards. The World Logistics Center's (ID 7) environmental document found it could contribute to cumulative impacts related to substantial changes to the visual character of its site and surrounding area. However, given that the Project is consistent with policies governing scenic resources and is 2.9 miles distant from the World Logistics Center project, the development of the Project together with World Logistics Center would not result in a cumulatively considerable impact. Thus, the Project would not result in a cumulatively considerable impact related to a conflict with applicable zoning and other regulations governing scenic quality. **Impacts would not be cumulatively considerable.**

Threshold 4: Light and Glare Impacts

The Project site is located on undeveloped land in an urban area and would introduce new sources or lighting typical of residential and mixed-use development and would be similar to the previously approved projects. The majority of cumulative projects are surrounded by existing development with the exception of Gateway Heights (ID 31) and the World Logistics Center (ID 7). Sources of nighttime lighting in the vicinity include interior and exterior security lighting, parking area lighting, architectural highlighting, and landscape lighting. In addition, automobile headlights, streetlights and stoplights along the roadway network contribute to ambient nighttime lighting levels on the Project site. Development of the Project would contribute new sources of light to the surrounding area. However, lighting associated with the Project and cumulative projects would be required to present exterior lighting plans for parking and other site areas are to demonstrate compliance with Section 9.08.100, Lighting, of the City's Municipal Code. Cumulative impacts related to lighting would not be cumulatively considerable.

Concerning glare, the Specific Plan Amendment design guidelines provide for clear glazing of windows and limited use of reflective materials (see Appendix A). While photovoltaic solar panels would be provided at the site, such panels are designed to absorb light, not reflect it, and would be coated with anti-reflective materials to maximize light absorption. Existing and proposed projects in the Project vicinity would similarly be designed to minimize glare through the choice of building materials, finishes, visual articulation, and other methods. Therefore, the Project would not combine with other cumulative projects in a manner that results in significant glare. **Impacts would not be cumulatively considerable.**

5.3.2 Agricultural Resources

The cumulative impact geographic area for potential agricultural impacts includes the City and western Riverside County.

Threshold 1: Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

As described in Section 4.2, there is no land at the Project site or within off-site improvement areas designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2018). In addition, the Land Use Element of the 2040 General Plan does not designate any land

for agriculture on its land use maps. As such, the construction or operation of the Project would not combine with cumulative projects in a manner that would result in a cumulatively considerable impact related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, **impacts would not be cumulatively considerable.**

Threshold 2: Conflict with Agricultural Zoning or Williamson Act Contract

The City does not contain areas zoned for agricultural uses (City of Moreno Valley 2021a). The Project site is not zoned for agricultural uses and is not subject to a Williamson Act contract. Thus, the Project would not combine with cumulative projects in a manner that would result in a cumulatively considerable impact related to a conflict with land zoned for agriculture or under Williamson Act contract (CEQA Guidelines Section 15130). Therefore, **the Project would result in no cumulative impact.**

Threshold 3: Conflict with Zoning for Forestland or Timberland

The City does not contain land zoned for forestland, timberland, or timberland production (City of Moreno Valley 2021a). The Project site is, accordingly, not zoned for forestland, timberland, or timberland production and would result in no impact under this threshold. Thus, because the Project would result in no cumulative impact related to land zoned for forest or timberland production, the Project would result in **no cumulative impact** (CEQA Guidelines Section 15130).

Threshold 4: Loss or Conversion of Forest Land

The City does not contain any forest land (City of Moreno Valley 2021b), and the Project site does not contain forest land. Thus, because the Project would result in no impact related to a loss of forest land or conversion of forest land to a non-forest use, the Project would not cause or contribute to any potential cumulative impact in these respects (CEQA Guidelines Section 15130). The Project would result in **no cumulative impact.**

Threshold 5: Indirect Conversion of Farmland or Forest Land

No land in the City is or has been identified for agriculture on the City's land use maps in the 2040 General Plan. The City does not contain any forestland, timberland, or timberland production zones. While some agricultural land remains in the region, it is planned for future urbanized use with or without the cumulative projects. The Project site has been out of agricultural production since the 1980s and is located in an urban infill area, such that it will not result in significant indirect impacts related to the conversion of farmland or forestland. Because the Project would not involve other changes in the existing environment that could result in the conversion of farmland or forest land, the Project would not cause or contribute to any potential cumulate impact. For these reasons, the Project and cumulative projects would not result in cumulatively considerable indirect impacts concerning the conversions of farmland or forest land. **Impacts would not be cumulatively considerable.**

5.3.3 Air Quality

The geographic scope of the area potentially affected by cumulative air quality impacts consists of the South Coast Air Basin (SCAB) for impacts related to mass construction emissions and operational emissions, in particular mobile sources (i.e., vehicle trips). This geographic scope was selected because emissions from construction and operational activities can contribute to exceedances in criteria air pollutant concentrations, which are measured and regulated by air districts (which is the South Coast Air Quality Management District [SCAQMD] for this Project)

based on the air basin. The Project and the related projects are all located within the SCAB. Regional growth in the SCAB, as established in general plans and regional plans produced by SCAG would also contribute to cumulative air quality impacts in the categories of construction emissions and mobile source emissions.

Other aspects of air quality impacts are more localized (toxic air contaminant [TAC] emissions, impacts to sensitive receptors, and odor emissions). For these impacts, the geographic scope of the area potentially affected by cumulative impacts consists of the Project's immediate vicinity. This geographic scope was selected because impacts in the categories of TACs, sensitive receptors, and odors dissipate quickly with distance and affect adjacent and nearby land uses. As such, the Project could combine with related projects in the immediate vicinity (e.g., within 1,000 feet) to produce a cumulative impact. This would include cumulative projects IDs 1, 11, 25, 30, and 34.

Threshold 1: Conflict with Air Quality Plan.

As discussed in Section 4.3.4, Impact Analysis, the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993) established two criteria to determine if a project would conflict with the SCAQMD Air Quality Management Plan (AQMP), which is currently the 2022 AQMP. Consistency Criterion No. 1 is evaluated by the Project's potential to exceed numeric thresholds and Consistency Criterion No. 2 is evaluated by the Project's potential to exceed assumptions in the AQMP.

Regarding Consistency Criterion No. 1, the Project's construction-source emissions would not exceed applicable SCAQMD regional thresholds after implementation of **Mitigation Measure (MM) AQ-2** through **MM-AQ-7**. However, the Project's operational-source emissions would result in exceedances of regional thresholds for emissions of volatile organic compounds (VOCs), oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), even after implementation of PDFs and mitigation. As such, the Project would conflict with Consistency Criterion No. 1 of the SCAQMD CEQA Air Quality Handbook.

Regarding Consistency Criterion No. 2, the Project's population and employment projections generally fall within the Southern California Association of Governments' (SCAG's) projections in the 2022 AQMP for the City. However, the Project would focus additional housing and employment to the Project site in the City's Downtown Center, creating a larger number of dwelling units and a denser land use pattern than assumed in SCAG's projections, and, consequently, the 2022 AQMP. Thus, the Project would potentially conflict with Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook. Implementation of **MM-AQ-1** would ensure that the appropriate growth and land use projections at the Project site would be incorporated into the next SCAG Regional Transportation Plan/Sustainable Communities Strategy and the following SCAQMD AQMP, which would resolve this inconsistency in the future.

Based on the above considerations, the impact of the Project, in addition to the additional growth anticipated through cumulative projects listed in 5.1, would constitute a potentially significant cumulative impact related to AQMP implementation with mitigation. Therefore, the Project would contribute to a **cumulatively considerable and significant** impact related to conflicting with the SCAQMD's AQMP.

Threshold 2: Potential to Result on a Cumulatively Considerable Net Increase of Any Nonattainment Criteria Pollutant.

Air pollution by nature is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient

air quality standards. The potential for the Project to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable NAAQS and/or CAAQS, is addressed in Section 4.3.4, Impacts Analysis. As set forth therein, the Project would exceed SCAQMD construction thresholds for VOC and NO_x, before mitigation, but with mitigation incorporated would reduce impacts to a less than significant level. As such, the potential cumulative impact related to construction emissions of criteria pollutants would **not be cumulatively considerable**.

The Project would exceed SCAQMD operational thresholds for VOC, NO_x, CO, $PM_{2.5}$ and PM_{10} emissions, and even with the incorporation of mitigation, would result in significant and unavoidable impacts. Thus, the Project's cumulative impacts related to operational emissions with respect to the potential to result in a cumulatively considerable net increase in any nonattainment criteria air pollutant would be **cumulatively considerable and significant**.

Threshold 3: Exposure of Sensitive Receptors to Substantial Pollutant Concentrations.

The Project would exceed applicable SCAQMD construction localized significance thresholds (LSTs) for $PM_{2.5}$ and PM_{10} before mitigation, but with mitigation incorporated would reduce impacts to a less than significant level. Cumulative localized impacts would potentially occur if Project construction were to occur concurrently with another off-site project. Construction schedules for potential future projects near the project site are generally unknown and are considered speculative.[2] Although there could be some overlap, the maximally exposed receptor upon which the localized impact determination is based would be different for the Project and each cumulative project; as such, the maximum localized emissions from each project would not be additive at the same receptors. Additionally, related projects would be subject to CEQA (or have already been reviewed under CEQA) and would require air quality analysis and, where necessary, would implement all feasible mitigation if the project would exceed SCAQMD thresholds. In addition, all construction projects within the SCAB would be required to comply with the same SCAQMD rules as the Project. SCAQMD rules that the Project and the related projects would be required to comply with are discussed in Section 4.3.2 and include Rule 402 (Nuisance), Rule 403 (Fugitive Dust), and Rule 1113 (Architectural Coatings).

No operational LST analysis was determined to be necessary per the voluntary SCAQMD LST guidance as the Project would not result in substantial on-site sources of criteria air pollutant emissions (e.g., stationary sources), especially since the Project eliminates most of the anticipated natural gas use (with implementation of PDF-AQ/GHG-2).

The Project would not expose sensitive receptors to localized high concentrations of CO or contribute to traffic volumes at intersections that would cause a CO hotspot during construction or operation when assuming operation of the Project plus background levels and reasonably foreseeable future projects. As such, potential construction or operational CO hotspot impacts would be less than significant without mitigation. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing.

A construction health risk assessment (HRA) was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for proximate residential receptors because of Project-generated TACs during construction. Project construction activities would exceed the cancer risk significance threshold of 10 in 1 million,

[2] The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This discussion is nonetheless provided in an effort to show good-faith analysis and comply with CEQA's information disclosure requirements.

but with mitigation (**MM AQ-2**), would be reduced to a less than significant impact. Project construction would not exceed the chronic hazard Index prior to mitigation.

As with the LST analysis, no operational HRA was determined to be required as no long-term, operational sources of TACs are anticipated. As such, potential operational health risk would result in a less than significant impact without mitigation.

SCAQMD does not have an established cumulative health risk approach but has initiated a public process (including four Working Group meetings as of June 2023) for the development of additional guidance for public agencies when they evaluate cumulative air quality impacts from increased concentrations of TACs for projects subject to the requirements of CEQA. Importantly, as part of this public process, SCAQMD has not included construction health risk in the cumulative health risk analysis recommendations since construction is typically short-term. However, the draft applicability of the cumulative health risk concept includes long-term construction with the examples of transportation projects such as high-speed rail but does not define a number of years. Because construction of the Project is assumed to have a duration of 12 years, it may not qualify as a short-term project and may be applicable in the final guidance once issued. Nonetheless, as described above, the Project itself would result in health risk impacts from construction that would be less than significant with implementation of **MM-AQ-2**. Therefore, it is anticipated that the Project would also not result in a cumulatively considerable health risk impact from construction. In addition, SCAQMD has indicated that projects that consist of primarily residential development, such as the Project, would also screen out of a cumulative health risk analysis for operations since they tend to have low potential cancer risk (SCAQMD 2023). Overall, based on the preceding considerations, potential cumulative health risk associated with Project development (focusing on construction health risk) would be potentially significant prior to mitigation and less than significant after mitigation.

As such, the potential cumulative impact related to exposure of sensitive receptors would **not be cumulatively considerable**.

Threshold 4: Potential to Result in Other Emissions (e.g., Odors) Adversely Affecting Substantial Number of People.

Odor impacts are generally limited to the immediate area surrounding the source. The Project would result in less than significant impacts to other emissions, specifically odors, without mitigation where it proposes predominantly residential uses that are not commonly associated with substantial odor emissions. Potential odors from the Project site would be temporary and limited (due to the type of land uses including residential which are not typically substantial odor-producing land uses) and cumulative projects, among other developments in the SCAB, would be subject to SCAQMD Rule 402 (Nuisance). Therefore, Project impacts would **not be cumulatively considerable**.

5.3.4 Biological Resources

Projects contributing to cumulative effects on biological resources include those in the immediate vicinity of the Project.

Threshold 1: Substantially Effect Special-Status Plant or Animal Species

If cumulative projects are located within an MSHCP, they would be required to comply with the policies and regulations therein. Consistency with the Western Riverside County MSHCP results in the ability of a project to rely on the MSHCP for mitigation related to cumulative biological impacts.

As stated in Section 4.4.4.2, no special-status plant species have ever been recorded on the Project site during previous surveys conducted on the site. Because of the highly disturbed nature of the Project site and general lack of suitable habitat, special-status plant species are not expected to occur on the Project site. Therefore, no significant impacts on special-status plant species are expected to occur.

As also stated in Section 4.4.4.2., a total of 16 special-status wildlife species were identified as having some potential for occurrence on the Project site; five of these species were previously observed during surveys associated with the 1999 Final Environmental Impact Report for the Moreno Valley Field Station Specific Plan. Due to the highly disturbed nature of the site, and with the exception of burrowing owl and least Bell's vireo, the potential for these previously observed species to occur on the site was considered very low. Fourteen of the 16 species are also "covered species" under the MSHCP. As such, potential impacts or "take" of these species by the Project and other cumulative projects in the region are covered by the MSHCP.

Focused surveys for five species—burrowing owl, least Bell's vireo, Riverside fairy shrimp, San Diego fairy shrimp, and vernal pool fairy shrimp—were conducted as required by the MSHCP. Surveys for the burrowing owl and the three fairy shrimp species were negative. Surveys were conducted for least Bell's vireo within the limited areas of the site that contain suitable riparian nest habitat for this species, primarily in the Line F mitigation channel along the southern edge of the Riverside County Flood Control channel. Several individuals of this species were observed within these areas of the site at the eastern terminus of the channel. No least Bell's vireos were detected elsewhere on site, likely due to the heavily disturbed nature of the site, along with other reasons outlined in Section 4.4.4.2. Least Bell's vireo is a covered species under the MSHCP, such that any adverse impacts or take of the species that may occur as a result of future proposed development of the Project site and other projects within the region would be mitigated by various conservation measures included as part of the MSHCP.

For the small number of other species with some potential to occur, because of the highly disturbed nature of the site (approximately 70% of the site) in areas proposed for construction, any of these species potentially occurring on the site prior to construction are expected to only occur temporarily or in such low numbers that potential impacts on individual animals would not be considered substantial under CEQA. In addition, because 14 of the 16 special-status species observed or with some potential to occur on the site are "covered species" under the MSHCP, any potential direct or indirect impacts on these species by the Project and cumulative projects would be mitigated by various avoidance and minimization measures, as well as regional habitat preservation initiatives, incorporated into the MSHCP. **MM-BIO-1** through **MM-BIO-3**, listed in Section 4.4.6.2, would further serve to avoid and minimize the Project's less than significant impacts to special-status wildlife species.

Based on the discussion above, and with implementation of all proposed measures in Section 4.4.6.2, the proposed Project's contribution to cumulative impacts on special-status plant and animal species with respect to similar impacts associated with related projects in the Project vicinity **would not be cumulatively considerable**.

Threshold 2: Have a Substantial Adverse Effect on Riparian Habitat or other Sensitive Natural Community

Two riparian vegetation communities occurring on the Project site are documented as "sensitive" by the CDFW, both of which occur within the Line F riparian mitigation channel. While the Cottonwood-Red Willow/Arroyo Willow/Mulefat Association occurring within the Line F mitigation channel will be preserved in perpetuity, the Black Willow/Mulefat Association occurring within the riparian area at the eastern terminus of the Riverside County Flood Control channel may be affected by the development of the Project. The Black Willow/Mulefat Association is relatively small, fragmented, surrounded by residential development, and disturbed through ongoing human activity (off-road vehicles and pedestrian traffic). No other natural vegetation communities considered sensitive by CDFW

or USFWS occur on the site. Further, both the Project and cumulative projects are subject to the MSHCP, which minimizes and mitigates for impacts to riparian habitat and sensitive natural communities through a riparian protection process and habitat acquisition and preservation.

Therefore, the Project's contribution to cumulative impacts on riparian or other sensitive natural communities with respect to similar impacts associated with related projects in the Project vicinity would **not be cumulatively considerable.**

Threshold 3: Have a Substantial Adverse Effect on State or Federally Protected Wetlands

While a number of shallow pools formed on site during the heavy rain events in 2022/2023, based on a vernal pool assessment, none of these pools were determined to be vernal in nature or to be hydrologically or biologically linked to any drainage features. No other wetland or aquatic features other than the flood control channel in the southeastern portion of the site occur on the Project site.

The riparian area that occurs at the eastern terminus of the Riverside Flood Control channel on the Project site (Figure 4.4-1) contains a well-defined natural drainage that joins the County flood control channel that bisects the southern portion of the Project site. However, because the drainage and associated riparian vegetation is small, surrounded by residential development, and heavily disturbed through ongoing human activity, the overall biological functions and values of this small segment of the drainage is considered to be relatively low, and any Project impacts would not be considered a substantial adverse effect on state- or federally protected wetlands or another aquatic resource. Further, the drainage is assumed to be under the regulatory jurisdiction of the CDFW, USACE, and Regional Water Quality Control Board, such that appropriate permitting and mitigation would be required for any proposed development in this area. Further, any such features that would be impacted by other cumulative projects in the vicinity would trigger the need for regulatory permits from these agencies, which would ensure appropriate mitigation measures are required prior to any impacts to a jurisdictional resource. Therefore, the Project's contribution to cumulative impacts on state- or federally-protected wetlands would **not be cumulatively considerable.**

Threshold 4: Substantially Interfere with Wildlife Movement Corridors or Impede the Use of Native Wildlife Nursery Sites

As discussed above, if cumulative projects are located within an MSHCP they would be required to comply with the policies and regulations therein. Consistency with the MSHCP results in the ability of a project to rely on the MSHCP for mitigation related to cumulative biological impacts.

The Project site is surrounded by dense residential and commercial development and major arterial roads which severely limit the ability of terrestrial animal species to access the Project site. While there are some undeveloped parcels of land immediately to the north of the site, these parcels are also bordered by existing development and/or arterial roads and most of the parcels are managed as agricultural lands which typically do not provide suitable movement habitat for terrestrial animal species. As such, no open space or habitat linkages connect the Project site with other large natural open space areas in the Project vicinity. In addition, no documented or established migratory movement corridors or landscape linkages are known to occur adjacent to or within the Project site.

Because of the extensively disturbed nature of the Project site, the dominance of the site by open non-native grasslands in the less disturbed areas, and the general lack of existing natural habitat to support wildlife nursery

sites (bat roosts or maternity sites, bird nest rookeries, etc.), no nursery sites are known to occur or expected to occur on the site.

Further, the Project and cumulative projects are subject to compliance with the MSHCP, which provides for reserve assembly and habitat conservation in a manner that preserves habitat cores as well as linkages and constrained linkages between habitat areas. The Project site is not located within a MSHCP criteria cell and is not designated for any existing or proposed linkage. The MSCHP mitigation fee for the site has been paid, which will contribute to the long-term management and monitoring of the MSHCP Conservation Area.

Therefore, the Project's contribution to cumulative impacts on wildlife movement or native wildlife nursery sites with respect to similar impacts associated with related projects in the Project vicinity would **not be cumulatively considerable.**

Threshold 5: Conflict With Local Policies or Ordinances Protecting Biological Resources, Such as Tree Preservation Policy

Section 9.17.03 of the City of Moreno Valley Municipal Code addresses the removal of trees as a result of project development. Specifically, the Code stipulates that the removal of existing trees with four-inch or greater trunk diameters at breast height (dbh) shall be replaced at a 3:1 ratio, with a minimum 24-inch box size trees of the same species, or a minimum 36-inch box for a 1:1 replacement, in locations approved by the City. This section of the Code also stipulates that the removal of heritage trees (trees with 15-inch dbh or more) is generally prohibited unless certain conditions are met (i.e., the tree[s] poses a dangerous or hazardous condition to people, structures and property, or if the tree is diseased, dying, or dead, and if a reasonable undertaking to preserve the tree had occurred). No such trees meeting the jurisdictional requirements of this City code occur on the Project site. Further, the Project would plant a total 30,000 trees at the site per PDF-AQ/GHG-11, and would implement **MM-BIO-4** to ensure consistency with Section 9.17.03 of the City's Municipal Code and further reduce potential impacts to City-regulated trees. Therefore, the proposed Project's contribution to cumulative impacts on trees regulated by the City code, or any other City code with respect to biological resources, with respect to similar impacts associated with related projects in the Project vicinity would **not be cumulatively considerable**.

Threshold 6: Conflict With Adopted Local, Regional, and/or State Habitat Conservation Plans

As discussed in Section 4.4.2, the entire Project site is within the Western Riverside County MSHCP Plan Area. Consistency with the MSHCP results in the ability of a project to rely on the MSHCP for mitigation related to cumulative biological impacts.

The Project would comply with relevant measures of the MSHCP as presented in Volume I, Chapter 6.0 (Riverside County Transportation and Land Management Agency 2003). The MSCHP mitigation fee for the site has been paid, which will contribute to the long-term management and monitoring of the MSHCP Conservation Area. The Project site is within the Stephens' Kangaroo Rat HCP fee area, and thus subject to payment of a fee for "take" coverage for any Stephens' kangaroo rat potentially occurring on the site. With this required payment, the Project would not conflict with the provisions of this HCP.

MM-BIO-1 through **MM-BIO-3**, listed in Section 4.4.6.2, would further serve to avoid and minimize the Project's less than significant impacts to special-status wildlife species including least Bell's vireo, burrowing owl, and other avian species consistent with the MSHCP.

Through compliance with the Western Riverside County MSHCP and the Stephens' Kangaroo Rat HCP, the proposed Project's contribution to cumulative impacts on adopted habitat conservation plans with respect to similar impacts associated with related projects in the Project vicinity would **not be cumulatively considerable.**

5.3.5 Cultural Resources

Cumulative impacts to cultural resources could result from the Project in conjunction with other past, present and future projects if (1) the cumulative area would be expected to contain archaeological, historic, and paleontological resources similar to the area that encompasses the Project area, (2) there is coherence in regional past Native American occupation and land use between the Project area and cumulative projects, or (3) there is similarity in patterns of historic development between the Project area and cumulative projects. Thus, the geographic scope of this cumulative analysis extends to local and regional projects.

Threshold 1: Adverse Change in Significance of Historical Resource

The 2040 General Plan identifies just two historic resources within the City, neither of which are present in the Project area: the Old Moreno School, located approximately 2 miles northeast of the site, and First Congregational Church, located approximately 2.5 miles northwest of the site. As discussed in Section 4.5.5, there are no known historical resources present in the Project area and the Project would result in no impact to historic resources. Because the Project would result in no impact related to historic resources, the Project would likewise not cause or contribute to any potential cumulative impact in this respect (CEQA Guidelines Section 15130). Impacts would **not be cumulatively considerable.**

Threshold 2: Adverse Change in Significance of Archaeological Resource

The 2040 General Plan identifies specific policies aimed at preserving significant historic and cultural resources within the City. As discussed in Section 4.5.5, there are no known archeological, historical, or cultural sites or significant features present on the Project site or in the Project area, and the likelihood of encountering unidentified subsurface cultural/archaeological deposits on site is considered low. Further, **MM-CUL-1** through **MM-CUL-9** will ensure the protection of cultural resources if discovered in the Project area.

Similar to the Project, past, present, and reasonably foreseeable future development projects in the City would be required to comply with the goals and policies of the applicable general plan, PRC section 21083.2, and other the regulatory requirements that mandate evaluation and consideration of potential impacts to historic and cultural resources prior to development. Future development projects would be required to incorporate mitigation measures, if necessary, in accordance with CEQA and other laws. Therefore, the Project's contribution to substantial adverse changes in the significance of archaeological cultural resources would **not be cumulatively considerable**.

Threshold 3: Disturb Human Remains

As discussed in Section 4.5.5, no known human remains have been identified at the Project area and the likelihood of encountering such remains is considered extremely low based on archival research, pedestrian surveys, and prior site disturbance. Further, **MM-CUL-7** through **MM-CUL-8** will ensure the protection of human remains if discovered in the Project area. Similar to the Project, past, present, and reasonably foreseeable future development projects in the City would be required to comply with the goals and policies of the demonstrate consistency with the applicable general plan, PRC section 21083.2, and other regulatory requirements concerning the discovery of human remains and to implement mitigation, if necessary, in accordance with CEQA and other laws. Therefore, the

Project's contribution to substantial adverse changes in the significance of archaeological cultural resources would **not be cumulatively considerable**.

5.3.6 Energy

Threshold 1: Wasteful, Inefficient, or Unnecessary Energy Resource Consumption.

Cumulative projects that could exacerbate the Project's impacts include any projects in the region that could result in wasteful, inefficient, or unnecessary use of energy (see Table 5-2, above). As described in Section 4.6, Energy, while the Project would result in an increase in electricity consumption, the Project would be designed to maximize energy performance and would use renewable energy on site as determined to be feasible and would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum, during Project construction or operation. Cumulative projects would be subject to CEQA and would require an energy analysis, analysis of consistency with existing plans and policies for renewable energy and energy efficiency, and implementation of control measures and mitigation, if necessary to avoid wasteful, inefficient or unnecessary consumption of energy resources. Further, like the Project, cumulative projects would be subject to state law, including the mandatory energy requirements found in Title 24, Part 6 of the California Energy Code, the California Building Energy Efficiency Standards (Title 24 CCR Part 6) and Part 11, California Green Building Standards (Title 24 CCR Part 6). Like the Project, cumulative projects in the City would also be required to demonstrate consistency with the applicable general plan measures related to energy efficiency and resource consumption, which would promote renewable energy use and minimize the wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the Project's contribution to cumulative impacts would **not be cumulatively considerable**.

Threshold 2: Conflict with or Obstruct a Renewable Energy or Energy Efficiency Plan.

Cumulative projects that could exacerbate the proposed Project's impacts include any projects in the region that could result in wasteful, inefficient, or unnecessary use of energy (see Table 5-2, above). As described in Section 4.6, Energy, the Project would be designed to maximize energy efficiency in building construction and operation, including through solar power generated on site, EV charging stations, bicycle amenities, and site connectivity, as well as by providing connections to existing transit services. The Project would be consistent with and exceed the mandatory requirements of state law, including Parts 6 and 11 of Title 24, and would be consistent with applicable general plan measures related to energy efficiency and construction energy use.

Like the Project, cumulative projects would be subject to CEQA and would require an energy analysis, analysis of consistency with existing plans and policies for renewable energy and energy efficiency, and implementation of control measures and mitigation, if necessary to avoid wasteful, inefficient or unnecessary consumption of energy resources. Further, like the Project, cumulative projects would be subject to state law, including the mandatory energy requirements found in Title 24, Part 6 of the California Energy Code, the California Building Energy Efficiency Standards (Title 24 CCR Part 6) and Part 11, California Green Building Standards (Title 24 CCR Part 6). Like the Project, cumulative projects in the City would also be subject to appliable general plan measures related to energy efficiency and resource consumption, which would promote renewable energy use and minimize the wasteful, inefficient, or unnecessary consumption of energy resources. On this basis, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the Project's contribution to cumulative impacts would **not be cumulatively considerable**.

5.3.7 Geology and Soils

The geographic context considered for the cumulative analysis is, variously, the immediate Project vicinity and the City of Moreno Valley, as described herein. The City has adopted specific regulations within their grading regulations and building codes (e.g., California Building Code) to reduce potential geology and soils impacts.

Threshold 1a: Earthquake Fault Rupture

The analysis of cumulative fault rupture impacts is generally site-specific or localized in the immediate vicinity, rather than cumulative in nature, because fault-rupture hazards are entirely dependent on location and do not combine to become cumulatively considerable unless overlapping or adjacent to a Project. The Project site is not within or near an Alquist-Priolo Earthquake Fault Zone. In addition, all cumulative projects near to the Project site are subject to the regulatory requirements of the Alquist-Priolo Earthquake Fault Zoning Act, which limits exposure to fault rupture hazards. Further, like the Project, development associated with all cumulative projects would comply with the California Building Code (CBC) and City regulations, which set stringent seismic safety standards. Therefore, the contribution of the Project to impacts associated with rupture of a known earthquake fault would **not be cumulatively considerable**.

Threshold 1b: Seismic Ground Shaking.

Generally ground shaking hazards are site-specific or localized in the immediate vicinity, rather than cumulative in nature, because each cumulative project site has unique geologic considerations (e.g., distance to earthquake epicenter and geotechnical characteristics of underlying materials) which can vary substantially across relatively short distances. Like the Project, all cumulative projects would be subject to current CBC requirements and City regulations, which include stringent seismic design requirements to minimize the potential damage or injury from seismic events. Therefore, there would be no cumulative impact related to seismic ground shaking because these hazards vary widely throughout the area, are generally site-specific, and any potential risk of cumulative impacts would be mitigated by building code compliance. Therefore, there would be **no cumulative impact**.

Threshold 1c: Seismic-Related Ground Failure (Liquefaction)

The analysis of impacts resulting from liquefaction hazards is generally site-specific, rather than cumulative in nature, because liquefaction hazards are entirely dependent on site-specific conditions and can vary widely over short distances. These hazards do not generally combine with one another to become cumulatively considerable. The Project site is considered to have a low potential for liquefaction based on site-specific conditions. Like the Project, each of the cumulative projects would be subject to the City's grading and building code requirements, including the CBC, which would ensure any needed site preparation, grading, or building requirements to mitigate seismic-related ground failure hazards would be implemented (e.g., by soil removal or improvement, drainage, or building practices to minimize the hazard). Compliance with the City's grading requirements and building code requirements, which include stringent standards for addressing liquefaction hazards, would reduce any potential impact below significance. Therefore, the Project contribution to seismic-related ground failure impacts would **not be cumulatively considerable**.

Threshold 1d: Landslides

Cumulative impacts related to landslides could occur if projects were connected to a single area that is vulnerable to landslides and the project activities together combine to exacerbate the hazard (e.g., multiple projects cutting into the toe of a landslide area). However, landslide hazards are largely site-specific or focused in an immediate, landslide-prone area based on topography, underlying geologic materials, and drainage conditions. The Project site is located in a relatively flat area with no known historical landslides. In addition, the Project would be required to comply with the recommendations and specifications in the geotechnical report and the CBC. Like the Project, all cumulative projects would be required to comply with the City's grading and building regulations, including the CBC, which includes slope stability requirements. Therefore, the Project would not contribute to a cumulative impact associated with landslides and the impact would **not be cumulatively considerable**.

Threshold 2: Erosion and Loss of Topsoil

Construction activities associated with cumulative projects would include earthwork activities that could expose soils to the effects of wind and water erosion in the short-term. Like the Project, cumulative projects would be required to comply with local grading regulations and National Pollutant Discharge Elimination System (NPDES) requirements, which include implementation of erosion and sediment control measures that would reduce erosion. The proponent of each cumulative project would be required to submit detailed grading plans prior to obtaining grading permits. Approval of the grading permits would require compliance with the applicable standards of the City's Grading Ordinance. Projects that would disturb more than one acre of land would be required to obtain an NPDES permit and to comply with South Coast Air Quality Management District (SCAQMD) Rule 403, Fugitive Dust. As with the Project, Storm Water Pollution Prevention Plans (SWPPP) would also be required of cumulative projects to reduce potential erosion and surface water discharge impacts. The SWPPPs would include erosion control features to reduce potential soil erosion to less than significant. With implementation of all required regulations and preparation and implementation of SWPPPs, construction-related impacts relative to erosion or loss of topsoil would **not be cumulatively considerable**.

Long-term operation of cumulative projects could have the potential to cause soil erosion or loss of topsoil if soil stabilization measures are not incorporated into ongoing operations. However, soil stabilization measures would be required of the Project and cumulative projects pursuant to the City's Grading Ordinance, City landscape and irrigation standards, hydrology/water quality permitting, and other state and local regulations. The Project and each cumulative project would include detention/retention, treatment, vegetation, and soil stabilization measures to reduce potential long-term soil erosion or the loss of topsoil with the measures identified. Thus, cumulative erosion and topsoil impacts would **not be cumulatively considerable** during operation.

Threshold 3: Unstable Soils

As with liquefaction and landslide hazards, unstable soil hazards are dependent on site-specific conditions which can vary greatly over short distances. As a result, since the cumulative projects represent varying locations with likely varying underlying conditions, they could not combine to become cumulatively considerable. In addition, like the Project, all cumulative projects are subject to the regulatory requirements and compliance with current CBC requirements which include standards for ensuring that underlying materials can adequately support proposed improvements. The Project and cumulative project implementation of appropriate construction techniques and compliance with the CBC would reduce unstable soil impacts to less than significant. Therefore, Project impacts associated with unstable soils would **not be cumulatively considerable**.

Threshold 4: Expansive Soils

Expansive soils are soils that can, over time, exhibit volumetric changes due to changes in moisture content which over time can result in damage to improvements. The presence of expansive soils is dependent on site-specific characteristics of underlying soils, which can vary over short distances. The Project and all cumulative projects are subject to the regulatory requirements of the CBC, which includes standards for expansive soils. The Project and cumulative projects implementation of appropriate construction techniques and compliance with the CBC would reduce expansive soil impacts to less than significant. Therefore, the contribution of the proposed modified project to impacts associated with expansive soils would **not be cumulatively considerable**.

Threshold 5: Septic Systems

The Project does not include the construction of any septic or alternative wastewater disposal systems. Therefore, the Project could not contribute to any cumulative impacts associated with wastewater disposal systems (CEQA Guidelines Section 15130). There would be **no cumulative impact**.

Threshold 6: Paleontological Resources

The geographic scope for cumulative impacts to paleontological resources includes the immediate vicinity and City of Moreno Valley. Early Pleistocene very old alluvial fan deposits, which have high paleontological resource sensitivity, are located in the Project vicinity and in the location of cumulative projects. Development of cumulative projects could result in disturbance of highly sensitive soils at depths that could result in impacts to paleontological resources. While no paleontological resources were identified at the Project site by a record search conducted by the Western Science Center (WSC) and the Natural History Museum of Los Angeles County (LACM), and while the site has been substantially graded and disturbed, the paleontological records search revealed nine fossil localities located nearby within Pleistocene geological units similar to the unit that underlies the majority of the Project site. Therefore, the Project site was determined to have high potential to produce paleontological resources in areas underlain by early Pleistocene very old alluvial fan deposits and at depth where underlain by Holocene sand and gravel deposits during planned construction activities. However, **MM-GEO-1** would be implemented as part of the Project and would avoid or reduce potential impacts to previously undiscovered paleontological resources through construction monitoring and resource recovery. All other cumulative projects with potential to significantly impact paleontological resources would be required to comply with all applicable laws, ordinances, and regulations. Typical mitigation measures implemented by cumulative related projects would reduce potential impacts to paleontological resources through monitoring and proper resource recovery. Thus, the Project impact would **not be cumulatively considerable**.

5.3.8 Greenhouse Gas Emissions

Threshold 1 & 2: Potential to Generate GHG Emissions and Potential to Conflict with an Applicable Plan, Policy, or Regulation.

GHG emissions are an inherently cumulative impact resulting from past, current, and future projects—and the cumulative projects listed in Table 5-2 would likely contribute to this widespread cumulative impact given the cumulative nature of greenhouse gas emissions. Given the global scope of climate change, it is not anticipated that a single project would have an individually discernible effect on global climate change. It is more appropriate to conclude that if a project is anticipated to result in a substantial increase in greenhouse gas emissions, it would combine with global emissions to cumulatively contribute to global climate change.

As shown in Section 4.8, Greenhouse Gas Emissions, the Project would result in less than significant impacts to greenhouse gas emissions and, therefore, would not result in a cumulatively considerable impact. The Project would include the adoption of a General Plan Amendment to allow for an increase in residential units on the Project site compared to the City's current 2040 General Plan land use designations, which would result in greater GHG emissions at the site than currently planned. As a result, the Project would not be able to tier from City's CAP. However, the Project would be consistent with most, but not all, of the required CAP measures prior to mitigation. The Project also would be consistent with the applicable voluntary CAP measures. The analysis further indicates that, with **MM-AQ-2** and **MM-AQ-4**, the Project would be consistent with all required project-level GHG reduction measures identified in the City's CAP checklist. In conformance with the CAP and in light of ongoing litigation on the City's Climate Action Plan (CAP), a fulsome GHG analysis emissions was also completed pursuant to other criteria.

Specifically, Project consistency with the 2022 CARB Scoping Plan Update and SCAG 2020–2045 RTP/SCS was analyzed. Regarding consistency with the 2022 CARB Scoping Plan Update, the Project would meet most, but not all, of the key attributes for residential and mixed-use development projects set forth in Appendix D, Local Actions, of the Scoping Plan (see Table 4.8-6). For the two key attributes not precisely met, *i.e.*, 20% of units affordable to lower-income residents and elimination of all natural gas usage, the Project's design features and mitigation measures are shown, based on substantial evidence, to achieve equivalent GHG emission reductions. Specifically, the Project's mid-rise multifamily residential product would achieve equivalent or better GHG reductions compared to affordable housing, and **MM-GHG-1** would offset any reductions that would otherwise be achieved by eliminating natural gas from Project restaurants. As such, with all PDFs and mitigation, the Project is shown to be consistent with the State's climate goals.

Further, Section 4.8 establishes that the Project would be consistent with the SCAG 2020–2045 RTP/SCS by furthering SCAG's strategies to reduce GHG emissions. Further, while the Project would create a denser land use pattern by focusing additional housing and employment to the Project area, the Project's residential and employment projections fall within SCAG's growth projections for the City during the planning period. Implementation of **MM-AQ-1** would ensure that the appropriate growth and land use projections at the Project site would be incorporated into the next SCAG RTP/SCS. Thus, impacts would be less than significant.

Given the Project's consistency with statewide, regional, and local plans adopted for the purpose of reducing GHG emissions with mitigation incorporated for individual Project impacts, the Project's emissions and their effects on climate change would **not be cumulatively considerable.**

5.3.9 Hazards and Hazardous Materials

Cumulative impacts related to hazards and hazardous materials could result from projects that combine to increase exposure to hazards and hazardous materials, which could result in potential impacts to the public or the environment. Therefore, the geographic context considered for potential for cumulative impacts related to hazards and hazardous materials is more localized or site-specific than other impacts, and is considered to be those in the immediate vicinity of the Project. As described in Section 4.9, Hazards and Hazardous Materials, through compliance with regulatory requirements and mitigation measures, the construction or operation of the Project would result in less than significant individual impacts.

Threshold 1: Routine Transport, Use, or Disposal

The Project would comply with regulations governing hazardous materials transported, handled, or disposed of on site during construction and operation, and this mixed-use residential project is not anticipated to use or generate

high quantities of potentially hazardous materials. The list of cumulative projects in Table 5-2 contains a mix of residential, commercial, institutional, industrial and mixed-use projects, some of which would require the transportation of potentially hazardous materials. Although cumulative projects have the potential to result in significant impacts to hazards and hazardous materials, these projects would be subject to federal, state, and local regulations that would help reduce potential impacts related to transport of hazardous materials. Impacts would **not be cumulatively considerable**.

Threshold 2: Reasonably Foreseeable Upset and Accident Conditions

Potentially contaminated soils on site would be remediated in compliance with regulations and **MM-HAZ-1** and **MM-HAZ-2**, which provide for soil remediation and dump site characterization and closure. Impacts to groundwater would be less than significant with implementation of **MM-HAZ-3** and **MM-HAZ-4**, which provide for water quality evaluation and treatment and well decommissioning (or monitoring).

Although cumulative projects have the potential to result in significant impacts to hazards and hazardous materials, these projects would also be subject to federal, state, and local regulations that would help reduce potential impacts related to transport of hazardous materials, foreseeable upset and accident conditions, hazardous emissions, and location on a list of hazardous material site. Cumulative projects may also require similar mitigation measures to help further reduce potential hazard/hazardous materials impacts. Because cumulative projects would be fully regulated, thus reducing potential for public safety risks, cumulative impacts associated with exposure to hazards and hazardous materials would **not be cumulatively considerable**.

Threshold 3: Hazardous Materials within One-Quarter Mile of a School

Three schools are located within one-quarter mile of the Project site: Vista Del Lago High School to the southwest; Landmark Middle School to the east, and La Jolla Elementary to the east. The Project proposes the development of three elementary schools and one middle school site. Cumulative projects that are within a quarter mile of these schools include Kaiser Hospital expansion (ID 24) and Beyond Food Mart (ID 25), which are both within 0.25 miles of Landmark Middle School. Potentially contaminated soils on site would be remediated in compliance with regulations and **MM-HAZ-1** and **MM-HAZ-2**, which provide for soil remediation and dump site characterization and closure. Any impacts related to hazardous emissions or materials handled near schools would similarly be less than significant through compliance with regulations and **MM-HAZ-1** and **MM-HAZ-2**. Similarly, the cumulative projects' (Kaiser Hospital expansion or Beyond Food Mart) compliance with federal, state, and local regulations would ensure these projects result in less than significant impacts related to hazardous materials near schools, as set forth in the CEQA documents for those projects. Impacts would **not be cumulatively considerable**.

Threshold 4: Cortese List Site

The Project site is not listed on the Cortese List. **No cumulative impact** would occur.

Threshold 5: Safety Hazards Related to Airports

The Project site is located outside the safety and noise zones for the March Air Reserve Base /Inland Port Airport (March ARB). **No cumulative impact** would occur.

Threshold 6: Impair or Interfere with an Emergency Plan

Cumulative projects in the vicinity could result in interference with an adopted emergency response or emergency evacuation plan. However, this would be based on the location of the cumulative project and its specific design requirements. The risks associated with impairment or physical interference with an adopted emergency response plan or emergency evaluation plan would be reduced through required consultation with City police, fire, and transportation departments, and conformance with building code, fire, and other regulations. It is anticipated that cumulative projects would be required to obtain approvals from the appropriate department and demonstrate conformance with applicable codes and regulations to ensure safe and effective emergency response and evacuation can be achieved. Therefore, the Project and cumulative projects would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would **not be cumulatively considerable**.

Threshold 7: Expose People or Structures to Wildland Fires

Cumulative projects in the City could be located in areas subject to wildland and urban fires. Cumulative impacts involving wildfires may be increased through unsafe development adjacent to a High or Very High Fire Hazard Severity Zone. The risk to each cumulative project is based on the location and interface between urbanized area and wildland areas. The risks associated with development would be reduced and mitigated through conformance with state law and strict Fire and Building Code regulations, which address access, fuel modification, building materials, and other requirements that provide fire-hardened structures. The risks associated with cumulative development would also be mitigated through payment of fair share fees/development to ensure adequate fire stations, equipment, and personnel. The Project is located in an infill area outside of any Fire Hazard Severity Zone. The Project's less-than-significant contribution to fire risk, in combination with the impacts of other cumulative projects, would not cause or contribute to significant cumulative impacts related to risks from wildland fires. For these reasons, Project impacts would **not be cumulatively considerable**.

5.3.10 Hydrology and Water Quality

The geographic context for the analysis of cumulative impacts associated with water quality is the San Jacinto River Watershed for water quality associated with stormwater runoff, the San Jacinto Groundwater Basin for groundwater supplies and sustainable groundwater management, and the Santa Ana Regional Water Quality Control Board (RWQCB) Basin Plan boundaries for water quality control plan compatibility.

Threshold 1: Violate Water Quality Standards or Substantially Degrade Water Quality

Cumulative development in the San Jacinto watershed will likely increase impervious surfaces and add new potential sources of pollutants in stormwater runoff. Construction activities associated with development could temporarily increase the number of exposed surfaces that could contribute to sediments in stormwater runoff. Additionally, materials associated with construction activities could be deposited on surfaces and carried to receiving waters in stormwater runoff. For example, spills and leaks could occur from the use of construction equipment during construction activities as well as from construction equipment located within staging areas. These spills and leaks could include substances such as fuels, oils, solvents, and paints.

Like the Project, all cumulative development in the watershed would be subject to the existing regulatory requirements to protect water quality and minimize increases in stormwater runoff, which are created to collectively protect watersheds from incremental releases at individual sites. For example, the NPDES Construction General

Permit requires the development and implementation of a SWPPP for all construction sites larger than 1 acre to mitigate potential impacts to water quality from polluted stormwater runoff. To comply, construction site best management practices (BMPs) would be required to control runoff, sediment, and erosion, and ensure that construction waste is adequately handled and disposed. These BMPs are required elements of a SWPPP that describes the construction operator's activities to comply with the NPDES General Construction permit. Because cumulative projects would be required to comply with the requirements of the NPDES General Construction permit program, cumulative water quality impacts to downstream areas would be less than significant. The Project's less than significant incremental contribution would not combine with the impacts of other projects in the cumulative scenario to cause or contribute to a significant cumulative effect related to construction water quality.

The operational activities associated with the cumulative projects would increase the potential for contaminants to enter stormwater runoff. Storm runoff from the roadways, parking lots, commercial and industrial buildings as well as residential uses can carry a variety of pollutants such as sediment, petroleum products, commonly utilized construction materials, landscaping chemicals, and (to a lesser extent) trace metals such as zinc, copper, lead, cadmium, and iron, which may lead to the degradation of storm water in downstream channels. Runoff from landscaped areas within cumulative projects may contain elevated levels of phosphorus, nitrogen, and suspended solids. Oil and other hydrocarbons from vehicles are also expected in cumulative stormwater runoff.

Every 2 years, the Santa Ana RWQCB must re-evaluate water quality within its geographic region and identify those water bodies not meeting water quality standards. For those impaired water bodies, a Total Maximum Daily Load (TMDL) must be prepared and implemented to reduce pollutant loads to levels that would not contribute to a violation of water quality standards. All developments within the San Jacinto River Watershed are subject to the water quality policies outlined in the Basin Plan and must comply with any established TMDLs. The continuing review process would ensure that cumulative development within the watershed would not substantially degrade water quality.

The City is co-permittee along with other cities and county areas within the San Jacinto River Watershed, which are subject to the requirements of their respective NPDES MS4 Permits. Currently, the NPDES MS4 permits require that the designer and/or contractor of all new development and redevelopment projects that fall under specific "priority" project categories must develop a Water Quality Management Plan (WQMP), which includes Low Impact Development (LID) Best Management Practices (BMP) design requirements related to water quality which would likely apply to all cumulative projects. The Project would implement BMPs, including the lakes (with the majority of the site draining towards the lakes), bioretention basins, etc., which would be used to reduce and treat runoff before stormwater is discharged to the lakes or into public waterways. Incorporation of these BMPs would improve water quality by reducing non-point source pollutant loads to meet TMDLs and NPDES stormwater regulations consistent with NPDES MS4 Permit requirements. Similar LID BMP features like bioretention basins would be included in cumulative projects, which would address long-term effects on water quality within the San Jacinto River Watershed and minimize potential water quality concerns to the maximum extent practicable. Therefore, impacts associated with water quality standards and polluted runoff in the watershed would be minimized and the Project's contribution to cumulative impacts would **not be cumulatively considerable**.

Threshold 2: Substantially Decrease Groundwater Supplies or Interfere with Recharge

A cumulative impact could occur if the Project's increase in groundwater demand, together with other projects, would substantially decrease groundwater supplies or interfere with recharge in a manner that impedes sustainable groundwater management of the San Jacinto Groundwater Basin. In accordance with the Sustainable Groundwater Management Act (SGMA), the San Jacinto Groundwater Basin is considered a high priority basin that is subject to

management by the Eastern Municipal Water District (EMWD) Board of Directors and development of a Groundwater Sustainability Plan (GSP); however, the Basin is not critically over-drafted (DWR 2023). EMWD recently adopted a GSP for the non-adjudicated portion of the basin (which includes the West San Jacinto Groundwater Basin Underlying the site), which GSP provides a roadmap for how the basin will reach long-term sustainability (EMWD 2021a).

The Project is anticipated to directly extract approximately 200-acre feet per year (AFY) of well water from the West San Jacinto Groundwater Basin to maintain the lakes, about 600-700 AFY less than the prior approvals. Pursuant to **MM-HYD-1**, the Project would be required to submit proposed groundwater extraction plans to EMWD for review and approval, which would ensure operation in accordance with the GSP for the San Jacinto Groundwater Basin. Thus, the Project is not anticipated to substantially increase the demand on groundwater in a manner that, together with other projects, could substantially decrease groundwater supplies in a manner that impedes sustainable groundwater management of the San Jacinto Groundwater Basin.

The Project and cumulative development will obtain potable water supplies predominantly from EMWD. The EMWD service area is planned to supplied by a diverse portfolio of local and imported water supplies that includes recycled water, potable groundwater, desalinated groundwater, and imported water from the Metropolitan Water District of Southern California. Thus, EMWD has flexibility in its sources of water supply and does not rely solely on local groundwater for meeting current and projected water demands. About half of the water used in the EMWD service area is imported by Metropolitan. Both EMWD and Metropolitan have prepared 2020 Urban Water Management Plans (UWMPs), which demonstrate an ability to meet current and projected water demands through 2045 during normal, historic single-dry and historic multiple-dry year scenarios (EMWD 2021b). The UWMPs for both EMWD and Metropolitan use regional population, land use plans, and projections of future growth as the basis for planning water system improvements (including water treatment plants) and demonstrating compliance with state water conservation goals and policies. As such, to the extent that related projects are generally consistent with regional growth patterns and projections, the projects would not be expected to result in increased water usage causing the need for new entitlements, resources, and/or treatment facilities that are not already being planned to accommodate regional growth forecasts. When coupled with the San Jacinto Groundwater Basin GSP, regional management of groundwater supplies is being conducted to ensure that these projects, as well as Project, would not substantially decrease groundwater supplies or impede sustainable ground management of the groundwater basin.

The Project and cumulative development would reduce the amount of pervious surfaces within the EMWD service area. This reduction of potential groundwater infiltration areas could cause a significant impact on groundwater recharge. However, the Project and cumulative projects would include the implementation of bioretention areas and detention basins that would provide for infiltration opportunities to minimize any impact. Thus, due to existing water planning efforts, adherence to SGMA requirements, and water conservation standards, as well as coordination with EMWD through implementation of Mitigation Measure HYD-1, impacts to decreasing groundwater supplies would be minimized, and the contributions of the Project would **not be cumulatively considerable.**

Threshold 3: Substantially Alter Drainage Pattern in a Manner that Causes Adverse Impacts

Cumulative development within the watershed could increase impervious surfaces, which could increase stormwater runoff rates and volumes and result in changes in land use that may increase the amount of pollutants in stormwater runoff in a manner that adversely affects receiving waters, overwhelms existing drainage control facilities, or impedes/redirects flood flows.

The Project would implement stringent drainage BMPs including conveying runoff to the lakes and using other bioretention basins and BMPs to reduce flow rates, volumes and pollutants before stormwater is conveyed off site. The Project would incorporate LID features to reduce impervious surfaces and stormwater runoff. The Project lakes and drainage structures would be designed to reduce peak stormwater flow rates and reduce peak discharges to not exceed pre-Project peak discharges. New development within the watershed would similarly be subject to the environmental review process and compliance with local stormwater regulations, such as the Construction General Permit, the Section 404 permit process of the Clean Water Act, local municipal code requirements, and local WQMP requirements, which would require drainage control improvements to minimize impacts.

Similar to the Project, other projects in the San Jacinto River Watershed would incorporate hydromodification features such that drainage rates would be no more than existing conditions. Therefore, impacts associated with changes in the drainage patterns in the watershed would be minimized, and Project impacts would **not be cumulatively considerable**.

Threshold 4: Risk Release of Pollutants due to Inundation

Flood hazards tend to be site specific and rely on the characteristics of individual sites that generally do not combine to become cumulatively considerable. The majority of the Project site is located outside any flood hazard area and would be subject to compliance with the City's Floodplain Ordinance, which establishes regulations to minimize losses and hazards due to flood conditions. Cumulative projects are subject to local flood control requirements, as well as regulatory requirements for the storage or handling of any hazardous materials. The Project would thus not cause or contribute to any potential cumulative impact in this respect (CEQA Guidelines Section 15130).

The Project and all cumulative projects are located well inland, and none are within a tsunami hazard zone. Thus, no cumulative impact would result related to tsunamis. Enclosed or semi-enclosed bodies of water that may result in seiche waves are also limited in the area and site-specific to areas relatively close to open water bodies. The risk of seiches was determined to be low to negligible at the site. The Project would thus also not cause or contribute to any potential cumulative impact in these areas (CEQA Guidelines Section 15130). Impacts would **not be cumulatively considerable**

Threshold 4: Conflict with Water Quality Control Plan or Sustainable Groundwater Management Plan

Construction activities associated with past, present and reasonably foreseeable future projects would include earthwork activities that could expose soils to the effects of wind and water erosion, adversely affecting water quality of receiving waters and conflicting with the goals and objectives of the Basin Plan. All cumulative projects, however, would require compliance with local grading ordinances and the NPDES General Construction Permit (for projects that disturb over 1 acre), which requires preparation and implementation of erosion and sediment control BMP measures pursuant to a SWPPP. In addition, cumulative projects are required to adhere to drainage control requirements which are also consistent with the Basin Plan.

As also discussed above in Threshold 2, cumulative projects that are located in the San Jacinto Groundwater Basin are part of regional growth planning and water supply management which is accounted for in UWMPs and also in the implementation of the basin's GSP. **MM-HYD-1** would ensure that there is coordination with EMWD for any groundwater extraction. Therefore, cumulative projects would not combine with the Project to contribute to a cumulative impact. As a result, the potential for the Project to contribute to a cumulative significant impact relative to implementation of a water quality control plan or sustainable groundwater management plan would **not be cumulatively considerable**.

5.3.11 Land Use and Planning

The geographic scope for land use and planning is the City of Moreno Valley and region because the Project site is located within the jurisdiction of the City of Moreno Valley and is subject to local and regional plans, policies, and regulations.

Threshold 1: Division of an Established Community

As described in Section 4.11, Land Use and Planning, the Project would not physically divide an established community. The cumulative projects listed in Table 5-2, are primarily located on infill sites within the City, adjacent to existing development, and adjacent to compatible land uses. Therefore, there would not be a cumulative impact related to the division of an established community, and further, the Project would not result in a cumulatively considerable contribution to an impact related to the division of an established community (CEQA Guidelines Section 15130). Impacts would **not be cumulatively considerable.**

Threshold 2: Consistency with Land Use Plans, Policy, and Regulations

The Project and related cumulative projects in the immediate vicinity are subject to the goals and policies of the applicable general plan and other planning documents, as applicable. Significant cumulative land use impacts could result if the Project, in combination with related projects, would result in a significant environmental impact due to an inconsistency or incompatibility with applicable plans or unintended land use impacts.

Locally, as discussed in Section 4.11, Land Use and Planning, the Project would be consistent with the applicable goals and policies of the 2040 General Plan and wit the City's Municipal Code and Zoning Ordinance. Further, upon approval of the GPA and rezone of the approximately 10 acres of the Project site, the Project would be consistent with the 2040 General Plan land use designation and zoning for the site. The Project would not be able to tier from the City's Climate Action Plan (CAP); however, the Project would be consistent with most required project-level CAP measures and would be consistent with voluntary CAP measures prior to the incorporation of mitigation. With incorporation of **MM-AQ-1** and **MM-AQ-4,** the Project would be consistent with all required project-level GHG reduction measures identified in the City's CAP checklist. Further, this SEIR provides a fulsome GHG analysis, as required by the CAP.

All cumulative projects listed in Table 5-2 would similarly be subject to establishing consistency with the applicable general plan and policies, which would ensure orderly development of the Project and cumulative projects. Any cumulative projects that propose amendments to the applicable general plan or Zoning Ordinance would be required to show that proposed uses would not result in significant environmental impacts due to a conflict with applicable policies in a similar way as the Project. Further, cumulative projects that would involve the intensification of uses compared to the applicable general plan would be required to demonstrate consistency with the City's CAP. Impacts would not be cumulatively considerable.

Regionally, as described in Section 4.17.5.2, the Project was determined to be consistent with the strategies of SCAG 2020–2045 RTP/SCS and growth projections. Similar to the Project, cumulative projects would be required to demonstrate consistency with SCAG 2020–2045 RTP/SCS.

The entire Project site and all cumulative projects are within the Western Riverside County MSHCP Plan Area. Consistency with the MSHCP results in the ability of a project to rely on the MSHCP for mitigation related to cumulative biological impacts. As discussed in Section 4.4, Biological Resources, the Project would not conflict with

the provisions of the MSHCP. Similar to the Project, proposed development of the cumulative projects must comply with all relevant measures of the MSHCP as presented in Volume I, Chapter 6.0 (Riverside County Transportation and Land Management Agency 2003).

Several cumulative projects are located within an airport influence area for March Air Reserve Base/ Inland Port Airport. However, the Project site is located outside the influence area for March Air Reserve Base/Inland Port Airport and therefore the compatibility criteria of the March ALUCP do not apply. Therefore, no cumulative impact would occur.

Thus, cumulative impacts related to land use and planning would **not be cumulatively considerable.**.

5.3.12 Mineral Resources

Threshold 1: Mineral Resources

There are no active mineral resource extraction facilities in the City or at the Project site. The 2040 General Plan land use maps do not delineate any mineral resource recovery sites or land designated for mineral resource production in the City or at the Project site. Therefore, the Project would not result in cumulatively considerable impacts (CEQA Guidelines Section 15130). There would be **no cumulative impact.**

Threshold 2: Mineral Resource Recovery Site

As previously described, there are no mineral recovery sites or mineral resource production sites in the City or at the Project site. The Project would not result in a loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plans. Therefore, the project would not result in cumulatively considerable impacts (CEQA Guidelines Section 15130). There would be **no cumulative impact.**

5.3.13 Noise

Threshold 1: Increase Noise Above Local Standards

Construction Noise

Construction noise impacts are highly localized and do not generally affect the community noise level at distances beyond 1,500 feet. Therefore, the geographic context for this analysis is the area immediately surrounding the Project site. The Project would not contribute to cumulative construction noise levels at receivers greater than approximately 0.25 miles from the Project boundaries. For nearby receivers (those located within 0.25 miles of the Project), should simultaneous construction activities occur near the edge of the Project site and at a cumulative project site located within 0.25 miles of such activities, construction could result in greater cumulative construction noise levels than would occur with construction of each individual project. The potential for construction schedules and activities to simultaneously overlap in the area in a manner that results in significant impacts is low. If simultaneous construction proximate to a receiver did occur, construction activities would generally use similar construction equipment as the Project. Therefore, at worst case, a given receiver might be exposed to a doubling of construction equipment (that from the Project and a cumulative project) associated with construction near a sensitive receiver. Doubling the construction equipment would result in a 3 dBA L_{eq} increase, which would be considered a barely perceptible increase in the noise, and would be rare and only for short periods of time.

Further, cumulative projects would be required to comply with the City's Municipal Code, which limits noise in Sections 8.14.040(E) and 11.80.030. Section 8.14.040(E) states that construction within the city shall only occur from 7:00 a.m. to 7:00 p.m. from Monday through Friday excluding holidays and from 8:00 a.m. to 4:00 p.m. on Saturdays. Section 11.80.030(D)(7) states that no person shall operate or cause the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of 8:00 p.m. and 7:00 a.m. such that the sound creates a noise disturbance. For power tools, specifically, 11.80.030(D)(9) states that no person shall operate or permit the operation of any mechanically, electrically or gasoline motor-driven tool during nighttime hours that causes a noise disturbance across a residential property line. A noise disturbance is defined as any sound that disturbs a reasonable person of normal sensitivities, exceeds the sound level limits set forth in the Noise Ordinance, or is plainly audible (as measured at a distance of 200 feet from the property line of the source of the sound if the sound occurs on privately owned property, or public right-of-way, public space, or other publicly owned property). Further, the imposition of **MM-NOI-1** (Construction Noise Barrier) and **MM-NOI-2** (Construction Noise Equipment Controls) would substantially reduce Project construction noise levels at nearby sensitive receptors. A maximum 3 dBA L_{eq} increase from cumulative projects, combined with mitigated Project construction noise levels would remain well below the recommended FTA 80 dBA $L_{eq\ 8hr}$ exposure, generating a maximum combined noise level of 74 dBA $L_{eq\ 8hr}$. Thus, although several construction activities may occur simultaneously in the surrounding community, given the distance between such activities, unlikely overlap of construction activities, cumulative project compliance with local standards, and Project mitigation, the Project would not result in a substantial contribution to cumulative construction noise. Impacts would **not be cumulatively considerable.**

Traffic Noise

The Project would generate roadway traffic, which would be added to roadway volumes generated by other projects on the assembled cumulative project list locally and within the immediate vicinity. The traffic impact assessment evaluated the resulting roadway volumes from the Project, in combination with the traffic generated from the cumulative project list. Dudek evaluated the change in community noise level for existing residences along roadways to which the Project would contribute trips, compared to the noise level from cumulative projects, and compared to the significance thresholds developed by Federal Interagency Committee On Noise (FICON) (See Table 4.13-3, Significance of Changes in Roadway Noise Exposure). As indicated in Tables 4.13-12 and 4.13-13, Project traffic contributions would result in traffic noise increases that exceed the FICON thresholds for four street segments, when comparing traffic noise levels from cumulative projects without versus with Project traffic. Thus, the Project **would contribute substantially to a cumulatively significant traffic noise impact**.

MM-NOI-3 (Traffic Calming Measures) includes traffic calming or reduction in posted speeds for affected segments of John F Kennedy Drive and Mason Streets to reduce these Project traffic noise contributions to less than significant levels. Impacts would **not be cumulatively considerable with mitigation.**

Noise From Stationary Sources

Non-transportation noise sources (e.g., HVAC equipment, residents) are typically project-specific and highly localized and do not affect the community noise level at distances beyond several hundred feet. Thus, the geographic context for this analysis is the area immediately surrounding the Project site. The Project's predicted operational noise is extremely low compared to ambient noise levels and the City's noise ordinance limit of 65 dBA CNEL, such that cumulative projects would not combine to exceed these levels, particularly given the distance between any cumulative noise sources (refer to Table 4.13-14). Further, noise generated by Project residents and their guests, as well of those of cumulative projects, is not an environmental impact under CEQA (California Public Resources

Code, Section 21085). As other development occurs in the area, noise from different types of uses would continue to combine on a localized basis to increase overall background noise conditions within the area. However, it is not anticipated that stationary Project noise sources would result in substantial cumulative contribution to community noise levels. Impacts would **not be cumulatively considerable.**

Threshold 2: Excessive Groundbourne Vibration or Groundbourne Noise

Groundborne vibration generated from construction equipment would be attenuated to 0.2 in/sec PPV (the significance threshold for human annoyance) at a distance of no greater than 60 feet from construction activity. None of the projects on the cumulative list are located within 60 feet of the Project site boundary. Therefore, the Project would have a less than considerable contribution to cumulative projects' construction-related vibration levels.

Groundborne noise generated from construction equipment would be attenuated to 78 VdB (the significance threshold for occupied residential structures) at a distance of no greater than 120 feet from construction activity. One project on the cumulative list (ID 30 – Rocas Grandes II) is located on a parcel immediately adjacent to the Project, along the north side of Phase 6 of the Project. However, the existing residential structures adjacent to the west side of Phase 6 are no closer than approximately 180 from the southern boundary of the Rocas Grandes II parcel. Therefore, the cumulative construction vibration impacts at these residences from potential simultaneous construction of the Project and Rocas Grandes II would **not be cumulatively considerable.** There are no other projects on the cumulative list that would be within 120 feet of a Project boundary.

The ongoing operation of residential structures, retail space, educational, open space, and commercial uses proposed by the Project would not generally involve rotational equipment or impact equipment that typically could result in groundbourne vibration or groundbourne noise. Truck deliveries in relation to the Project's commercial uses could create vibration at a distance of 18 feet; however, this would not extend beyond the road right-of-way and projects on the cumulative list are not located within 18 feet of the Project site boundary. Therefore, the Project would have a less than cumulatively considerable impact related to operational vibration and groundbourne noise levels. Overall, Project impacts to vibration and groundbourne noise would **not be cumulatively considerable.**

Threshold 3: For Project within Airport Land Use Plan or 2 Miles of Airport, Expose People to Excessive Airport Noise

The closest airport to the Project site is the March Air Reserve Base (MARB) located approximately 2.5 miles to the southwest; the Project site lies outside of the 60 dBA CNEL contour for airport operations. Therefore, the Project would not contribute to any impacts associated with airport noise (CEQA Guidelines Section 15130). There would be **no cumulative impact.**

5.3.14 Population and Housing

Threshold 1: Induce Substantial Unplanned Population Growth.

The geographic context for this analysis is the City of Moreno Valley, as population and housing are addressed by the City's 2040 General Plan. As discussed in Section 4.14, the 2040 General Plan buildout projections estimate approximately 22,052 new dwelling units and 47,162 new City residents would be added by 2040 (City of Moreno Valley 2021c). The Project would develop a total 15,000 multifamily housing units to house 43,050 people during this time. In addition, the RHNA has identified a total housing need of 13,627 new units in the City during the 8-year period from 2021 to 2029 (SCAG 2021). Based on the estimated phasing schedule, the Project would result in approximately 4,800 dwelling units during this 8-year period, which falls well within this forecast. Under the

proposed project conditions, these dwelling units would be constructed along with the other projected or planned housing projects listed in the cumulative project list (Table 5-2). The full buildout schedule is not known for every cumulative project; however it is likely a majority of these projects would build the majority of the units in this RHNA 8-year period. If all cumulative projects were constructed to full buildout they would result in a total of 6,599 units. Combined with the projected 4,800 dwelling units resulting from the Project in the same time period would be 11,399 dwelling units. As stated, it is not anticipated each cumulative project would be constructed to full buildout within the 8-year period, but even if they were, the total number of units, 11,399, would not meet the total housing need of 13,627 for this housing period. Thus, the Project would accommodate planned growth within the City and would not exceed it. However, the Project would focus development more within the Downtown Center area of the City on the Project's infill site compared to what was considered in planning documents.

Population growth can also occur from employment opportunities or from the expansion or extension of infrastructure that would support population growth. The Project would result in the creation of approximately 55,788 construction jobs and 1,443 permanent jobs, which is not anticipated to induce substantial population growth given the existing labor pool. Indirect population growth from the expansion of infrastructure in not anticipated, as infrastructure is already in place and connections will be appropriately sized for this Project. The Project is also located in an infill area and, as a result, is not anticipated to encourage intensified uses in areas surrounding the site.

Various cumulative projects listed in Table 5-2 could either directly or indirectly induce population growth in the City and surrounding area. However, many of these project sites have been previously slated for development, similar to the Project, and thus these increases in population have largely been accounted for in appropriate planning documents (that is, they are not "unplanned" growth). Counting the Project and all of the housing units that would be added with cumulative projects in the City, dwelling unit totals would remain within the estimates of the 2040 General Plan and RHNA allocation. Further, the introduction of a new population is not, in and of itself, a significant impact. Although Projects included in Table 5-2 would accommodate population growth, it is anticipated that, like the Project, these cumulative projects would be conditioned to ensure adequate and appropriate provision of services, utilities and infrastructure. Therefore, cumulative impacts to population and housing would **not be cumulatively significant.**

Threshold 2: Displace People or Housing

The Project site is currently vacant and undeveloped. Implementation of the Project would not displace any existing housing or people or necessitate the construction of replacement housing elsewhere. Cumulative projects in the City have the potential to displace people or housing; however, the Project's contribution to that impact is not cumulatively considerable (CEQA Guidelines Section 15130). There would be **no cumulative impact.**

5.3.15 Public Services

Threshold 1: Result in the need for new or expanded physical facilities which could cause significant environmental impacts.

A significant adverse cumulative impact to public services would occur if the service demands of the Project were to combine with those of related projects, triggering a need for new or physically altered public services, the development of which could cause significant environmental impacts. A significant adverse cumulative impact could also occur if the Project were to make a considerable contribution to a previously existing deficit in public services.

Fire and Police Protection

As discussed in 4.15.1, Existing Conditions, the Project site is served by the Moreno Valley Fire Department (MVFD) and Moreno Valley Police Department (MVPD). Cumulative growth in the Project vicinity would increase the demand for fire and police protection services. This growth would result in the need for additional fire station facilities in the future. The 2040 General Plan and MVFD Strategic Plan identify six future fire stations located throughout the City[3]., including a proposed new station in the vicinity of the Redlands Boulevard and Cactus Avenue intersection approximately 2 miles east of the Project site, and a proposed new station in the vicinity of the Alessandro Boulevard and Heacock Street intersection approximately 2 miles west of the Project site. Regarding police protection, the City has identified plans for expansion of the Moreno Valley Police Station to accommodate additional personnel, as well as completion of a new satellite police substation in the southeastern part of the City near the Project site. These new and expanded facilities planned as part of the 2040 General Plan would serve the projected population growth and cumulative projects.

In addition to the planned new and expanded facilities, both the MVFD and MVPD identified the need for expanded services as a result of the Project. As part of Project implementation, the applicant would be subject to the payment of Development Impact Fees (DIF), Section 3.38.070 of the Municipal Code, which would be used exclusively for future public facility improvements necessary to ensure the development contributes its fair share of costs for facilities and equipment determined to be necessary to adequately accommodate new development in the City. The DIF amount is determined through evaluation of the need for new public service facilities as it relates to the level of service demanded by new development, which varies in proportion to specific land uses. Any siting of new facilities would be subject to coordination between the City, MVFD, and the MVPD and is speculative at this time. However, note that public services are an allowed use at the Project site and, if developed on site, would be located within the Project development footprint. Future facilities and expansion would be subject to CEQA compliance, including environmental analysis and mitigation, as appropriate.

Cumulative projects would similarly be subject to the required payment of DIFs for fire and police capital facilities. Further, new developments would also generate revenues (in the form of property taxes, sales tax revenue, etc.) that would be applied toward the provision of fire and police protection resources and related staffing, as applicable. Thus, with payment of the applicable DIF, the Project would not result in a cumulatively considerable contribution to any cumulative police or fire protection services impacts. Impacts would **not be cumulatively considerable.**

Schools, Parks, and Other Facilities

The Project and cumulative projects within the City are served by Moreno Valley Unified School District (MVUSD). The Project would contribute to increased demand for school facilities along with the other cumulative projects that would develop residential units within the MVUSD service area. Based on student generation projections, the Project would result in the need for an additional 2.66 elementary schools. Upon consultation with the MVUSD through the receipt and respond to a questionnaire provided by Dudek (Appendix J) MVUSD indicated that the Project would result in the need for two new elementary schools, and additions or expansion to the existing Landmark Middle School and Vista del Lago High School in order to meet the needs of the additional students. Cumulative impacts to schools would be fully offset by the payment of the fees per Senate Bill 50 and the California Education Code (Title 1, Chapter 6, Section 17620), which allows school districts to charge fees on new

[3] As noted in Footnote 1, the Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information.

development within the district's boundaries and provides payment of fees constitutes full mitigation for any impacts, should they occur.

Increased use of parks and other public facilities, such as libraries, would occur as a result of the Project and cumulative projects. With the provision of on-site park facilities, as well as the contribution of an appropriate in-lieu fee, Project impacts related to the substantial deterioration of existing park facilities would be less than significant. Cumulative projects which include residential development would also be required to provide parkland or payment of an in-lieu fee in compliance with and Municipal Code Sections 3.38 and 3.40. The In-lieu fees would be used by the City to maintain, improve, expand or build new park facilities to account for the deterioration of existing parks from increased use.

As the Project would have a less-than-significant impact with respect to parks, schools, and other public services, the Project would not result in a cumulatively considerable contribution to any cumulative parks, schools, and other public services impacts, and no mitigation is required. Impacts would **not be cumulatively considerable.**

5.3.16 Recreation

Threshold 1: Use of existing neighborhood and regional parks or other recreational facilities.

As discussed in Section 4.16, the Project would provide on-site park facilities, as well as payment of an in-lieu fee in compliance with 2040 General Plan Policy PPS.1-2 and Municipal Code Sections 3.38 and 3.40. Payment of the in-lieu fees would be used by the City to maintain, improve, expand, or build new park facilities. Some cumulative projects, such as residential developments, would similarly have the potential to increase the demand for recreational facilities, which could result in deterioration of existing facilities. However, cumulative projects would also be required to comply with the City's parkland requirements through the payment of associated fees prior to the issuance of each building permit. Therefore, through compliance with the DIF program, cumulative impacts related to recreation would **not be cumulatively considerable**.

Threshold 2: Construction or expansion of recreational facilities.

Adverse physical effects resulting from the construction of recreational facilities as addressed throughout this SEIR as part of the Project and, with incorporation of in-lieu fees, Project impacts would be less than significant. Some cumulative projects would include recreational facilities and would be subject to the same parkland requirements and fees as the Project. Such parkland construction or expansion would be required to comply with the law, including CEQA, which would evaluate and adopt appropriate mitigation for any environmental effects. Therefore, through compliance with appropriate payments, cumulative impacts related to recreation would **not be cumulatively considerable.**

5.3.17 Transportation

Threshold 1: Circulation System, Bicycle and Pedestrian Network, Transit System

As discussed in Section 4.17, Transportation, the Project would be consistent with the 2040 General Plan Circulation Network and would construct circulation improvements, enhance active transportation, and provide enhanced transit access and facilities. Among other things, the Project would provide an extensive sidewalk network, promenade, trails, bike circulation network, and connections to bike routes in the City. The Project would work with RTA to improve transit and provide a shuttle to nearby employment centers. A number of Project design

features, PDF-Trans-1 through PDF-Trans-12, would further promote the goals and policies of local plans and programs, including Connect SoCal 2020 and the applicable general plan. Pursuant to City requirements, cumulative projects in the City would similarly be required demonstrate consistency with applicable regional and local plans, including Connect SoCal 2020. Therefore, cumulative impacts related to Threshold 4.17-1, would be less than significant under cumulative conditions and **not cumulatively considerable.**

Threshold 2: Consistency with the CEQA Guidelines Section 15064.3, subdivision (b).

Per City's transportation guidelines, if a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant subject to consideration of other substantial evidence. If it is not consistent with the RTP/SCS, a residential project would have a significant VMT impact if its net VMT per capita exceeds the average VMT per capita for Moreno Valley in the RTP/SCS horizon-year. As shown in Section 4.17.4, the Project would have a less than significant VMT impact under Horizon Year (2045) with full buildout of World Logistics Center, and Horizon Year (2045) with partial buildout of World Logistics Center. The Project effect on VMT was also determined to be less than significant under all scenarios. Therefore, cumulative impacts related to VMT, would be less than significant under cumulative conditions and **not cumulatively considerable**.

Threshold 3: Hazardous Features due to Design Features or Incompatible Uses

As discussed in Section 4.17, Transportation, the Project would not result in increased hazards related to design features, and Caltrans and City review of street improvement plans would ensure adequate safety. Queuing impacts from the Project and cumulative projects were evaluated at Horizon Year 2045, and impacts would be less than significant as sufficient storage lengths are available in turn lanes to accommodate the Project and cumulative projects. Further, cumulative projects in the City and immediate vicinity would be required to comply with all applicable local provisions related to the circulation system and roadway hazards. Compliance with City's standards for road alignment, access, traffic control, and safety requirements will be ensured through the City's development plan review process. Therefore, the Project's cumulative impacts related to hazardous design features would be less than significant under cumulative conditions and **not cumulatively considerable.**

Threshold 4: Emergency Access

In this infill area of the City in the vicinity of the Project, there are numerous potential emergency access and evacuation routes to major transportation corridors. The Project would be designed to meet all minimum fire apparatus access requirements of the Riverside County Fire Department and California Fire Code and to ensure adequate emergency access. Similarly, all cumulative projects in the City would be required to comply with all applicable City and County provisions related to the circulation system and emergency access. Adequate emergency access and compliance with emergency access and design standards would be ensured through review by the City and responsible emergency service agencies. The City maintains a current evacuation plan/Emergency Operations Plan (EOP), ensure that new development is provided with adequate emergency and/or secondary access, require visible street name signage, and provide directional signage to freeways at key intersections to assist in emergency evacuation operations. Further, any construction activities of the Project and cumulative projects that could potentially impact adjacent roadways, and thereby interfere with emergency access, would be subject to the City's Traffic Control Plan Guidelines & Checklist. Therefore, cumulative impacts related to emergency access would be less than significant under cumulative conditions and **not cumulatively considerable**.

5.3.18 Tribal Cultural Resources

The cumulative impact analysis of Tribal Cultural Resources (TCRs) considers whether impacts of the proposed Project, together with other related projects identified in the vicinity, when taken as a whole substantially diminish the number of TCRs within the same or similar context or property type. To date, no TCRs have been identified that would be impacted by Project implementation. Further, the likelihood of encountering unidentified subsurface resources on site is considered low in light of the high historic disturbance of the site, including its use for agriculture and prior grading, and records searches not identifying any resources in the Project area. However, tribal consultation with the City is ongoing, and this SEIR will be updated upon its conclusion. **MM-CUL-1** through **MM-CUL-9** would reduce any Project impacts to TCRs below significance. Thirty-nine cumulative projects have been identified under Table 5-2, above. Cumulative projects identified in Table 5-2 would be required to complete a similar evaluation of potential TCRs as the Project and would be subject to the same CEQA analysis and AB52 notification and consultation requirements prior to initiating a project development. This process would determine whether mitigation measures need to be adopted to reduce potential impacts either individually or cumulatively. Impacts to TCRs would be addressed on a case-by-case basis and would be mitigated to the extent practicable in accordance with CEQA. Given that the Project would result in less-than-significant impacts to TCRs, with the incorporation of mitigation, impacts associated with TCRs would **not be cumulatively considerable.**

5.3.19 Utilities and Services Systems

Threshold 1: Require or Result in Construction of New or Expanded Utilities, Which Would Cause Significant Environmental Effects

Water

The geographic context for cumulative water supply impacts is the Eastern Municipal Water District (EMWD) service area. Most of the cumulative projects identified in Table 5-2 are located within EMWD's service area for potable water service and would contribute to the cumulative demand for water. However, according to the EMWD 2020 UWMP, EMWD has the ability to meet current and projected water demands through 2045 during normal, historic single-dry and historic multiple-dry year scenarios as shown in Tables 4.19-6, 4.19.7, and 4.19.8 (EMWD 2021b). As shown in Table 4.19-6, EMWD would be able to meet the Project's demand for water with existing water supplies and water supply facilities. After accounting for the demands of the Project and other developments in EMWD's service area, EMWD continues to estimate it will have adequate water supplies to meet both Project and cumulative water demand, while maintaining an over 10,000 acre feet per year (AFY) buffer. Further, the 10,000 AFY buffer is expected to grow in the future due to factors such as ongoing water use efficiency legislation and potable water offsets from recycled water conversions. Similar to the Project, cumulative projects would be required to demonstrate adequate water supplies are available from EMWD or other sources prior to consideration as part of the development review process. Further, not all cumulative projects fall into the EMWD's service area; those that would be served by neighboring districts would not result in significant cumulative impacts with the Project. Therefore, the Project would not result in a cumulatively considerable impact related to the expansion or construction of facilities of water supply. Impacts would **not be cumulatively considerable.**

Wastewater

The geographic context for cumulative wastewater impacts is the Eastern Municipal Water District (EMWD) service area. Most of the cumulative projects identified in Table 5-2 are within EMWD's service area for wastewater service

and would contribute to the cumulative demand for wastewater treatment. EMWD anticipates the demand for future development through their master planning process. The Project's wastewater demand represents approximately 3.29% of the total amount of wastewater collected by EMWD per day, and approximately 15% of the current 16 MGD capacity of the Moreno Valley Facility's capacity. The amount of wastewater generated by the Project of 2.468 MGD at full buildout would be within the existing and future surplus treatment capacity of EMWD's four regional water reclamation facilities (existing 26 MGD capacity) and the Moreno Valley Facility (existing 4.5 MGD surplus capacity). The Moreno Valley Facility also has the ability to divert 2 mgd to the Perris Valley Facility, which has additional capacity. The EMWD is currently utilizing only 64% of the current capacity of all water reclamation facilities. Accordingly, cumulative projects, together with the Project's 3.29% increase, are not anticipated to exceed this capacity.

As discussed in Section 4.19.4, EMWD has sufficient capacity to account for the Project's estimated wastewater generation rate. Further, EMWD will be responsible for reviewing Project plans to ensure sewer flows will be accommodated and not adversely impact the existing system. Cumulative projects that result in an increase in density or development over what was accounted for by EMWD would further exacerbate wastewater deficiencies. However, these cumulative projects would also be subject to CEQA and required to mitigate any potential impacts to water supply services caused by the project. As such, cumulative impacts to wastewater facilities would be less than significant and **not cumulatively considerable.**

Stormwater Drainage

The cumulative impact geographic area for storm water drainage facilities is the watershed the Project site is located in. Section 4.10, Hydrology and Water Quality, of the EIR analyzes the stormwater drainage facilities planned to serve the Project site. It describes that the proposed drainage improvements, including the lake, infiltration basins, and other stormwater control best management practices (BMPs), would ensure the Project not substantially increase the rate or volume of surface runoff, such that the existing or planned capacity of stormwater drainage infrastructure would adequately accommodate the Project. Flows would be reduced to below or equal to pre-development conditions. Thus, the Project would not require the construction of new stormwater facilities or expansion of existing facilities beyond those evaluated with Project development in this SEIR. Similar to the Project, cumulative projects would be subject to CEQA review and required to comply with applicable laws and regulations. These regulations provide for the implementation of stormwater control BMPs and the reduction of impacts resulting from increased flow volumes and rates. As such, cumulative impacts to wastewater facilities would be **less than significant**.

Electric Power, Natural Gas and Telecommunication Facilities

Electricity

Potential cumulative impacts on energy would result if the Project, in combination with past, present, and future projects, would result in the need for the development of new or expanded electric power, natural gas, or telecommunication facilities. The cumulative projects served by Moreno Valley Electrical Utility (MVU) would be applicable to this analysis. The service area for MVU is located in the southeastern portion of the City.

As shown in Table 4.6-5-, the Project, without PDFs, is anticipated to consume approximately 131,591,218 kilowatt-hours (131,591.218 megawatt-hours) of electricity per year during project operation; however, at full buildout, the Project is anticipated to produce approximately 48,122,091 kilowatt-hours per year through solar PV electricity production not including solar water heating, which would be additional. Therefore, with implementation of PDF-

AQ/GHG-3 and PDF-AQ/GHG-4, the Project would consume 79,617,201 kilowatt-hours (79,617.201 megawatt-hours) of electricity annually during operation.. The Project and cumulative projects would increase demand on MVU for electricity. The Project's electricity consumption represents approximately 22% of the total consumption of MVU with the inclusion of PDF-AQ/GHG-3 and PDF-AQ/GHG-4. The WLC project is estimated to account for 74 to 113% of MVU's projected energy demand for 2024, and 161% of sales in 2037 when combined with cumulative projects for the WLC. Cumulative projects would be required to comply with the state's energy efficiency standards and local regulations and reduce inefficient uses of energy similar to the project. Additionally, projects like WLC would generate electricity through the installation of rooftop solar panels. As described in the MVU IRP, future energy resources are expected to be obtained via short-, medium- and long-term power purchase agreements. As described in the RFP, MVU targets to procure an additional 140,330 MWh of energy by 2037. Given that the Project would increase demand by 79,617 MWh, the Project's electricity demand could be served by MVU. Additionally, the Project would include significant rooftop solar energy generation which would offset demands on MVU supplies. Given the energy efficiencies and reductions utilized by the Project and other cumulative projects, MVU's procurement and efficiency targets, impacts to MVU facilities resulting in the need for expansion or new electrical facilities would **not be cumulatively considerable.**

Natural Gas

Southern California Gas Company (SoCalGas) provides Riverside County (including the City) with natural gas service, such that the scope of cumulative analysis is regional. The total capacity of natural gas available to SoCalGas in 2020 is estimated to be 3.8 billion thousand British thermal units (kBTU) per day. The Project would be fully electric with the exception of natural gas for restaurants within commercial development, as required by PDF-AQ/GHG-3. Accordingly, Project natural gas usage would be small, just 1,499,695 kBTU of natural gas per year, which amounts to less than 0.01% of SoCalGas' total capacity. Thus, the Project would not require new or expanded natural gas facilities. Further, the Project site is located in an infill area that allows for connection to existing infrastructure. While cumulative projects in the region may not commit to electrification, they would be subject to energy efficiency requirements of Title 24. Given the Project's minimal natural gas demand, impacts would **not be cumulatively considerable.**

Telecommunication Facilities

As discussed in Section 4.19, telecommunications services to the Project site may be provided by various distributors including Frontier, Spectrum, and AT&T by both overhead and underground facilities. No new or expanded telecommunication facilities would be required. Cumulative projects in the City have the potential to impact telecom facilities; however, the Project's contribution to that impact is not cumulatively considerable (CEQA Guidelines Section 15130). There would be **no cumulative impact.**

Threshold 2: Have Sufficient Water Supplies to Serve the Project and Reasonably Foreseeable Future Development

As discussed under Threshold 1, according to the EMWD 2020 UWMP, EMWD has the ability to meet current and projected water demands through 2045 during normal, historic single-dry and historic multiple-dry year scenarios as shown in Tables 4.19-6, 4.19.7, and 4.19.8 (EMWD 2021b). As shown in Table 4.19-6, EMWD would be able to meet the Project's demand for water with existing water supplies and water supply facilities. After accounting for the demands of the Project and other, cumulative developments in EMWD's service area, EMWD continues to estimate it will have adequate water supplies to meet both Project and cumulative water demand while maintaining an over 10,000 acre feet per year (AFY) buffer. Further, the 10,000 AFY buffer is expected to grow in the future due to factors such as ongoing water use efficiency legislation and potable water offsets from recycled water

conversions. Similar to the Project, cumulative projects would be required demonstrate adequate water supplies are available from EMWD or other sources prior to consideration as part of the development review process. Further, not all cumulative projects fall into the EMWD's service area; those that would be served by neighboring districts and would accordingly not result in significant cumulative impacts with the Project. Therefore, the Project would not result in a cumulatively considerable impact related to water supply. Impacts would **not be cumulatively considerable.**

Threshold 3: Wastewater Treatment Capacity

As described under Threshold 1, EMWD has sufficient capacity to account for the Project and cumulative project's estimated wastewater generation rate. Further, EMWD will be responsible for reviewing Project plans to ensure sewer flows will be accommodated and not adversely impact the existing system. Cumulative projects that result in an increase in density or development over what was accounted for by EMWD could further exacerbate wastewater deficiencies. However, these projects would also be subject to CEQA and required to mitigate any potential impacts to wastewater supply services caused by the project. As such, cumulative impacts to wastewater facilities would be less than significant and **not cumulatively considerable**.

Threshold 4: Solid Waste Generation

Similar to the Project, cumulative projects would generate solid waste to be disposed of at the Badlands Landfill and Lamb Canyon Landfill. Additionally, several cumulative projects would also be able to dispose of solid waste at El Sobrante Landfill. According to CalRecycle, the Badlands Landfill has a daily permitted capacity of 5,000 tons per day for solid waste. As of December 2020, the remaining capacity of Badlands Landfill is approximately 7,800,000 tons, with an anticipated closure date of 2059 (CalRecycle 2023a). The Lamb Canyon Landfill is permitted 5,000 tons per day, has a maximum capacity of approximately 39,681,513 tons, and a remaining capacity of 19,242,950 tons as of January 2018. It is anticipated that the landfill will cease operation in 2032 (CalRecycle 2023b). The Project's waste generation represents 0.57% of the total daily capacity of the Badlands and Lamb Canyon Landfills. Additionally, the El Sobrante Landfill is permitted 16,054 tons per day, a maximum capacity of 209,910,000 cubic yards (CalRecycle 2023c). Therefore, it is determined there is adequate capacity to serve future development projects, including those identified on the cumulative project list. Cumulative impacts related to solid waste would be less than significant and **not cumulatively considerable**.

Threshold 5 Solid Waste Statues and Regulations:

As described in Section 4.19, the Project would not exceed state or local standards or capacity of local infrastructure. Cumulative projects would be required to perform similar analyses, in accordance with CEQA, to ensure projects would have sufficient utilities. Impacts would **not be cumulatively considerable**.

5.3.20 Wildfire

Threshold 1: =Substantially Impair an Adopted Emergency Response or Emergency Evacuation Plan

The geographic context for this analysis is the City and areas surrounding the Project site. The Project site is not located in a State Responsibility Area (SRA) or Very High Fire Hazard Severity Zone (VHFHSZ). Cumulative impacts related to the impairment of an adopted emergency response or evacuation plan could result from multiple projects resulting in an obstruction of existing evacuation routes identified in the LHMP, an increased number of people

impeding safe evacuation, or impacts to the services that are responsible for implementing the evacuation and emergency response plans in a manner that impairs an emergency response or evacuation plan.

Impacts to Evacuation Routes

The Project and cumulative projects would not result in the permanent closure of any roads that have been identified as evacuation routes. However, temporary construction impacts related to road closures or decreases in road capacity would occur during the construction of First Industrial Warehouse at Day Street, World Logistics Center, Valley Garden, and Cactus Avenue and Nason Street. The only potential road closures the Project would have in common with cumulative projects are potential temporary closures to Nason Street and Cactus Avenue associated with the Nason Street and Cactus Avenue. Similar to the Project, any construction activities from cumulative projects that could potentially impact adjacent roadways, and thereby interfere with emergency access, would be subject to the City's Traffic Control Plan Guidelines & Checklist, including its Temporary Traffic Control Requirements (City of Moreno Valley 2022), which address applicable temporary traffic controls for all construction activities within the City public rights-of-way. The Temporary Traffic Control Requirements also include requirements related to preparation of a custom Traffic Control Plan which addresses work on arterials, night-time/weekend, temporary changes to signal timing, work with any road closures, major encroachment, and major street improvements associated with commercial/residential developments. Compliance with the City's Temporary Traffic Control Requirements would ensure adequate emergency access is maintained throughout Project construction. Further, the Flamingo Bay Apartments project proposes the widening of Alessandro Boulevard and, similar to the proposed Project, other the cumulative projects (including Town Center at Moval, Sunset Crossings, Moreno Valley Mall Redevelopment, Perris at Pentecostal) would involve the creation of new roads which can provide additional connectivity between existing roadways during an evacuation scenario.

Evacuating People

The Project site is not located in a State Responsibility Area (SRA) or Very High Fire Hazard Severity Zone (VHFHSZ). However, a VHFHSZ is located approximately ½ mile south of the Project site. Similar to the Project, cumulative projects would result in additional vehicles evacuating during construction and operation. As described under 5.3.14, various cumulative projects listed in Table 5-2 would either directly or indirectly induce population growth, however, the growth would occur over time, resulting in additional people evacuating the area in case of a wildfire evacuation scenario. Evacuation of the Project and cumulative projects were evaluated as part of the Evacuation Plan included as Appendix N. As shown in Table 4.20-1, under the cumulative project scenario, increases in evacuation time for the surrounding land uses including cumulative projects would result in an increase of 2-21 minutes compared to just cumulative projects and exiting land uses. Any additional time does not necessarily generate a greater safety risk. Emergency personnel who issue evacuation orders can consider the additional time needed to implement an evacuation when determining when and where to issue evacuation orders. Risk to nearby development, including the Project or existing communities, is assessed on a regular basis in a wildfire event. In a likely evacuation scenario, existing residents west of the Project site would be located downstream of Project traffic because they are closer to the evacuation routes and destinations and would be able to evacuate prior to Project traffic reaching the same location. Further, the Incident Commander would direct a focused evacuation of zones situated near the wild urban interface, which are at higher risk. As shown in Figure 5-1, cumulative projects are generally located in infill areas within the city, not located in or adjacent to the Wildland Urban Interface (WUI), SRA, or VHFHSZ. Areas that are not in immediate danger would likely not be provided with an evacuation notice initially and may be instructed to remain in place to prioritize the evacuation of vehicles from areas under direct threat. This would result in phasing evacuation traffic so that it flows more evenly and minimizes the surges that may slow an evacuation. The Project site and other infill urban infill areas may provide locations to shelter in place or act as

temporary refuge in an evacuation event. Therefore, the project would not contribute to a cumulatively considerable impact due to a conflict with an emergency operations plan or emergency response plan.

Impacts to Public Services

As identified in the EOP, Moreno Valley Police Department (MVPD) is responsible for evacuation efforts within the City. Impacts to police protection services, which would include the ability of police to coordinate evacuation efforts within the City, were analyzed in Sections 4.15 and 5.3.15. Similar to the Project, all cumulative projects would be required to pay applicable developer impact fees for each unit built in accordance with the City's requirements to support police services within the City.

As concluded in Section 4.20 and the analysis performed for the cumulative projects, impacts to the LHMP and EOP were determined to be less than significant. Additionally, the increase in population evacuating the City would occur over time and would allow for time for the LHMP and EOP to be updated to address the increased population. The LHMP is evaluated every 5 years to determine if updates are needed. Therefore, the project would not contribute to a cumulatively considerable impact.

Threshold 2: Exacerbate Wildfire Risks and Thereby Exposure Project Occupants to Pollutant Concentrations from Wildfire or the Uncontrolled Spread of Wildfire.

Cumulative impacts related to exacerbating wildfire risks the exposure of occupants to pollutant concentrations from wildfire could occur if numerous projects would increase wildfire risk in areas or attract people to areas high fire risk areas. The list of cumulative projects in Table 5-2 contains a mix of residential, commercial, institutional, industrial and mixed-use projects. None of these projects propose uses that would increase the ignition potential in the area compared to existing uses.

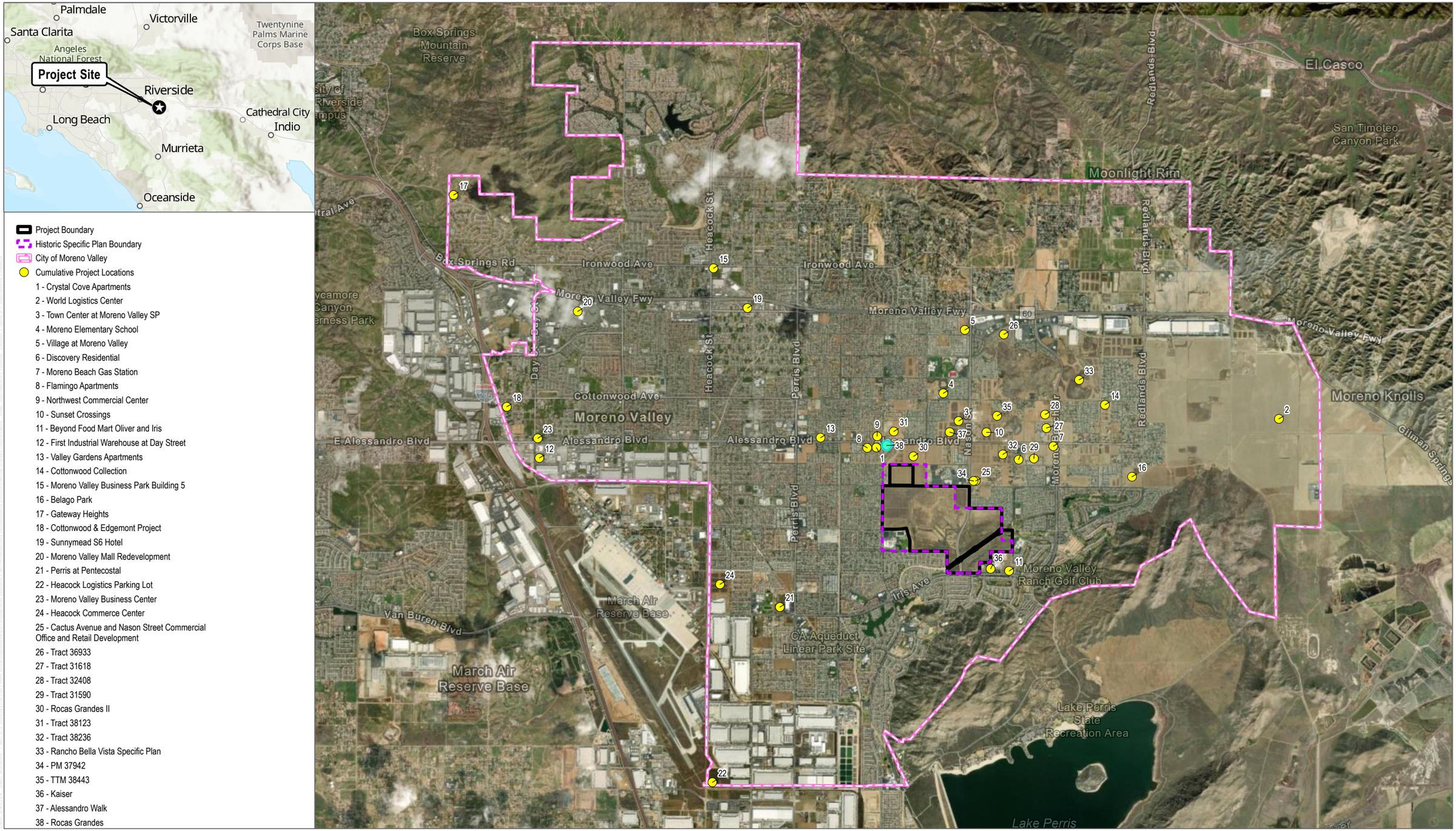
The Project – a multi-family residential mixed use project, is not considered to be the type of development that would exacerbate wildfire risk based on its use or location outside the VHFHSZ. Rather, the Project would comply with all current City and state fire code standards, provide hardscaping and fire breaks, and implement irrigated landscaping and a lake which would reduce the likelihood of fire ignition and spread on the project site. Several cumulative projects would introduce new residents and employees to previously vacant sites, which, like most areas of the state, have the potential to be exposed to pollutant concentrations from a wildfire event. However, as shown in Figure 4.20-1, VHFHSZs are generally limited to the southeastern and northern boundary of the City, away from the majority of the cumulative projects. Figure 5-1 shows cumulative projects are generally located in infill areas within the city, not located adjacent to WUI. Additionally, cumulative projects, like the Project, would be required to comply with all current City and state fire code standards, which would reduce the likelihood of fire ignition and spread. Similar to the Project, cumulative projects in the area would be advised to follow public health and air quality agencies strategies to limit exposure, which include staying indoors, limiting physical activity, reducing indoor air pollution sources, effectively using air conditioners and air filters or cleaners, creating cleaner air shelters, and using respiratory protection appropriately. Thus, cumulative projects are not anticipated to significantly increase the risk of ignitions or spread. Further, similar to the proposed Project, in the case of wildfire, residents of cumulative projects would be advised by public health and air quality agencies on strategies to limit exposure by their local health and air quality officials to reduce exposure to pollutants. Thus, cumulative impacts related to exposure of Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would not be cumulatively considerable.

Threshold 3: Wildfire Risk Resulting from Installation or Maintenance of Infrastructure

Introduction of infrastructure can have potential to increase cumulative fire risk from the increased ignition potential from construction and maintenance activities of utility infrastructure, or by placing infrastructure in an area with highly flammable fuel loads. Project utilities would generally be undergrounded, substantially reducing ignition risks in the area associated with construction, maintenance, or location of infrastructure (CEQA Guidelines Section 15130). Additionally, the Project site's primary circulation spine roads (Nason Street and Cactus Avenue), master drainage, and master flood control improvements have already been completed. Similar to the Project, some cumulative projects would require the installation and maintenance of new utility infrastructure. However, like the Project, several cumulative projects would include the undergrounding of utilities, substantially reducing ignition risks in the area. However, Further, the construction and operation of the proposed infrastructure would be in compliance with applicable state and local standards regulating fire risk. And, as described above and shown in Figure 5-1, the cumulative projects are generally located in infill areas that are not in proximity to WUI/VHFHSZs. Therefore, construction and maintenance activities associated with proposed infrastructure would not occur in proximity to areas that have high ignition and impacts would not be cumulatively considerable.

Threshold 4: Exposure of People to Risks from Flooding, Landslides, Runoff, Post-Fire Slope Instability, or other Drainage Changes

As described above in Section 5.3.7, cumulative impacts related to landslides could only occur if the projects were all somehow connected to a single area that is vulnerable to landslides where the activities of the projects together might combine to exacerbate the hazard (e.g., multiple projects cutting into the toe of a landslide). The Project site is located in a relatively flat area with no known historical landslides, and therefore would not contribute to a cumulative risk related to these post-fire changes (CEQA Guidelines Section 15130). The Project site's master drainage, and master flood control improvements have already been completed. In addition, all cumulative development would be required to comply with the CBC, which includes slope stability requirements. As described above under Section 5.3.10, like the Project, other projects in the San Jacinto River Watershed would incorporate hydromodification features such that drainage rates would be no more than existing conditions. Therefore, impacts associated with changes in runoff in the watershed would be minimized, and the contributions of the Project to cumulative impacts would not be cumulatively considerable. Further, the Project is located in an infill area, outside the VHFHSZ, and is surrounded by existing development on all sides; it would not represent a significant fire risk. Given that the Project would not increase risks of post-fire impacts such as flooding or landslides on site and the Project does not represent a significant fire risk, impacts related to exposure of people to significant risks related to runoff, post-fire instability, or drainage changes would not be cumulatively considerable.



- Project Boundary
- Historic Specific Plan Boundary
- City of Moreno Valley
- Cumulative Project Locations
  - 1 - Crystal Cove Apartments
  - 2 - World Logistics Center
  - 3 - Town Center at Moreno Valley SP
  - 4 - Moreno Elementary School
  - 5 - Village at Moreno Valley
  - 6 - Discovery Residential
  - 7 - Moreno Beach Gas Station
  - 8 - Flamingo Apartments
  - 9 - Northwest Commercial Center
  - 10 - Sunset Crossings
  - 11 - Beyond Food Mart Oliver and Iris
  - 12 - First Industrial Warehouse at Day Street
  - 13 - Valley Gardens Apartments
  - 14 - Cottonwood Collection
  - 15 - Moreno Valley Business Park Building 5
  - 16 - Belago Park
  - 17 - Gateway Heights
  - 18 - Cottonwood & Edgemont Project
  - 19 - Sunnymead S6 Hotel
  - 20 - Moreno Valley Mall Redevelopment
  - 21 - Perris at Pentecostal
  - 22 - Heacock Logistics Parking Lot
  - 23 - Moreno Valley Business Center
  - 24 - Heacock Commerce Center
  - 25 - Cactus Avenue and Nason Street Commercial Office and Retail Development
  - 26 - Tract 36933
  - 27 - Tract 31618
  - 28 - Tract 32408
  - 29 - Tract 31590
  - 30 - Rocas Grandes II
  - 31 - Tract 38123
  - 32 - Tract 38236
  - 33 - Rancho Bella Vista Specific Plan
  - 34 - PM 37942
  - 35 - TTM 38443
  - 36 - Kaiser
  - 37 - Alessandro Walk
  - 38 - Rocas Grandes

SOURCE: Maxar 2022

DUDEK

0 2,500 5,000 Feet

FIGURE 5-1

Cumulative Projects

Aquabella Specific Plan Amendment Subsequent Environmental Impact Report

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6 Other CEQA Considerations

6.1 CEQA Requirements

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) briefly describe potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues discussed in the following sections are not considered significant, and the reasons for the less than significant impact conclusions are discussed below.

6.2 Growth Inducing Impacts

Section 15126.2(e) of the CEQA Guidelines requires a discussion of how the potential growth-inducing impacts of a project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Induced growth is distinguished from the direct employment, population, or housing growth of a project (14 CCR Section 15126.2[e]). If a project has characteristics that "may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively," then these aspects of the project must be discussed as well (14 CCR Section 15126.2[e]). Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place in the absence of that project. Typically, the growth-inducing potential of a project is considered significant if it stimulates population growth or a population concentration above what is assumed in local and regional land use plans, or in projections made by regional planning authorities, such as the Southern California Association of Governments (SCAG).

Growth should not be assumed to be beneficial, detrimental, or of little significance to the environment (14 CCR Section 15126.2[e]). CEQA considers population growth to determine whether "increases in the population may tax existing community service facilities, causing significant environmental effects," or whether the project "may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively" (14 CCR Section 15126.2[e]). According to Section 15126.2(e) of the CEQA Guidelines, a project may foster economic or population growth or additional housing either directly or indirectly, including by removing obstacles to population growth.

As discussed in detail in Chapter 3, Project Description, of this subsequent EIR (SEIR), the Aquabella Specific Plan Amendment Project (Project) includes the amendment of the original Moreno Valley Field Station Specific Plan 218 to continue to develop 668.6 acres of the Aquabella site with 15,000 multifamily residences; 49,900 square feet of supporting commercial and retail uses, including a 300-room hotel; 80 acres of parks (comprised of 40 acres of lakes, plus a 15-acre lake promenade, and 25 acres of additional parks); 40 acres of elementary school and middle school sites; open space; public services and facilities; and other amenities. The Project responds to the substantial demand for multifamily and workforce housing options, while providing a central Town Center for recreation, shopping, and entertainment. The Project would result in the construction of an additional 12,298 multifamily and workforce housing dwelling units for all ages and income levels as compared to the prior project approvals, housing approximately 35,295 more people based on an average household size of 2.87 persons per dwelling unit. A total of 43,050 people would be housed at the development.

As discussed in Section 4.14, Population and Housing, of this SEIR, the 2040 General Plan[1], buildout projections estimate approximately 22,052 new dwelling units will be built in the City of Moreno Valley (City) by 2040 to house 47,162 new residents. The Project's 12- to 15-year construction period means that the 15,000 dwelling units, housing 43,050 people, would be fully built-out between 2037 and 2040. Thus, while the Project would create a denser land use pattern by focusing housing on the Project site in the City's Downtown Center, the Project would accommodate planned population growth and the housing need in the City through 2040. Therefore, anticipated Citywide growth projections are not attributable to the Project. Rather, the Project would assist in providing adequate housing supplies to accommodate anticipated growth in a region where, historically, housing supply has fallen short (SCAG 2020).

Further, the Regional Housing Needs Assessment has identified a total housing need of 13,627 new units in the City during the 8-year period from 2021 to 2029. Based on the estimated phasing schedule, the Project would result in approximately 4,800 dwelling units being built at the site during this 8-year period, which falls well within this forecast. SCAG's 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy forecasts an additional 64,900 new City residents by 2045 (SCAG 2020). Again, the 43,050 people estimated to be housed within the Project would fall within SCAG's forecast. Accordingly, the Project is anticipated to accommodate planned housing growth in the City and is not growth inducing. Infrastructure to serve the Project would be provided as part of Project development, such that less than significant impacts would result from the increased population concentration in the Downtown Center.

The proposed 49,900 square feet of commercial uses, including retail, would serve the on-site and local population and would not directly induce growth. Indirect population growth can result from employment opportunities or from the expansion or extension of infrastructure that would support population growth. The Project would result in the creation of approximately 55,788 one-time construction jobs and 1,443 permanent jobs. The Project's employment opportunities are not anticipated to induce substantial population growth given the size of the labor pool existing in the City and nearby communities. Rather, the Project is anticipated to house and accommodate area workers and students. The employment patterns of construction workers in Southern California are such that it is unlikely that they would relocate their households as a consequence of the construction employment associated with the Project. Construction workers regularly commute to job sites, and many workers are highly specialized such that their specific skills are needed to complete only a particular phase of the construction process. Further, it is likely that the skilled workers needed to complete the Project already reside within the region.[2]

Permanent jobs would mostly be associated with the Town Center and schools. The Project is not anticipated to cause significant numbers of people to relocate for employment purposes. Therefore, Project construction and

[1] In compliance with the Housing Crisis Act of 2019 (Senate Bill [SB] 330), on September 6, 2023, the Project applicant submitted a preliminary application and fee to the City. To accord housing developers certainty, the application "locks" in the effective development requirements and standards upon the date of submittal. The Project's preliminary application was submitted September 6, 2023 when the 2040 General Plan was in effect. Accordingly, this SEIR and the Specific Plan Amendment (SEIR, Appendix A) evaluate the Project's consistency with the 2040 General Plan. The 2040 General Plan and related EIR were also consulted for general and independently verifiable background information. However, this SEIR is prepared as a stand-alone Project analysis, which does not tier from the 2040 General Plan EIR or any other EIR document. It contains its own separate analysis of the environmental implications of the Project and its alternatives. The SEIR's incorporation by reference of the 2040 General Plan does not affect the SEIR's adequacy under CEQA, or any other law or regulation. In addition, if the prior 2006 General Plan and Final EIR is the effective General Plan when the Project goes before the City Council, the SEIR and Specific Plan Amendment (SEIR, Appendix A) also includes analysis of Project consistency with that prior Plan.

[2] Current employment opportunities in the City and the region come from the healthcare, local higher education, management, business, science, and arts occupations. The largest employers within the City presently include March Air Reserve Base, Amazon, Riverside University Health System Medical Center, Moreno Valley Unified School District, and Ross Dress for Less/dd's Discounts (City of Moreno Valley 2021).

operation is not anticipated to induce substantial unplanned population growth related to employment, which would be within the SCAG forecast of 29,400 new jobs within the City by 2045 (SCAG 2020). The Project's employment opportunities are not anticipated to induce substantial population growth given the size of the labor pool existing in the City and nearby communities.

Indirect growth inducement can also result from a project extending infrastructure in ways that supports or induces further growth, such as a Project extending water or sewer utilities to an undeveloped, rural area. The Project site is served by existing public services and utilities (including those built under prior project approvals) and is located in an infill area of urbanized Moreno Valley. Infrastructure improvements proposed as part of the Project would be located within the Project site and appropriately sized; no new off-site utility systems would be needed in order to serve the Project. Therefore, indirect growth inducement would not occur.

Overall, the Project would not result in significant impacts related to stimulating or inducing additional population growth, either directly or indirectly, that has not been planned as part of local or regional growth projections.

6.3 Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(c) further directs EIRs to address impacts from a project that will result in significant impacts, including those that cannot be mitigated below a level of significance. A summary of all the environmental issue areas, the resulting significance determination, and a listing of proposed mitigation measures is found in Chapter 1A, Executive Summary, of this SEIR. Two air quality impacts have been found to be significant and unavoidable after mitigation measures have been incorporated: impacts to air quality resulting from conflict with the South Coast Air Quality Management District's 2022 air quality management plan and exceedance of criteria air pollutant operational thresholds. The Project is being proposed notwithstanding these effects to further the Project objectives described in Section 3.2 of this SEIR.

6.4 Significant Irreversible Effects Due to the Proposed Project

The CEQA Guidelines mandate that an EIR address any significant irreversible environmental changes that would be involved in the proposed action should it be implemented (14 CCR Section 15126[d]). An impact would fall into this category if:

- The Project would involve a large commitment of nonrenewable resources.
- The primary and secondary impacts of the Project would generally commit future generations of people to similar uses.
- The Project involves uses in which irreversible damage could result from any potential environmental incidents associated with the Project.
- The proposed consumption of resources is not justified (e.g., the Project results in wasteful use of energy).

Determining whether the Project may result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of restoring them.

Construction of each of the Project components would result in the use of nonrenewable resources and energy sources, including fossil fuels, natural gas, and electricity, as further discussed in Section 4.6, Energy, of this SEIR.

Fossil fuels (including petroleum and gas resources) would be used to power construction equipment and would power delivery and construction employee vehicles. Construction equipment would also use electricity and natural gas. Use of these energy sources would be considered a permanent commitment of resources. In addition, a variety of resource materials would be used during the construction process, including steel, wood, concrete, and fabricated materials. Once these materials and fuels are used for purposes of construction, the commitment of such materials and fuels would be considered irreversible. However, the Project, when taking into consideration the global use of these materials, would not result in a large commitment of these resources.

Once operational, the Project would consume more energy daily than is currently consumed on the Project site, and likely more than would be consumed if the site were developed today under the prior project approvals. However, since the certification of the 1999 Final EIR for the Moreno Valley Field Station Specific Plan and the 2005 Moreno Valley Field Station Specific Plan Amendment EIR Addendum as detailed in Section 4.6, Energy, of this SEIR, many federal and state regulations have been adopted that require the use of renewable resources and substantially reduce building energy consumption. For example, according to the 2022 power content label for the Moreno Valley Electric Utility, which provides electricity to the Project site, renewable solar energy accounts for 33.4% of the utility's overall energy resources—a renewable energy number that is anticipated to increase over time in compliance with state law (MVU 2023). Further, the Project would install solar panels throughout the site, would eliminate natural gas for residential uses, and would install electric vehicle chargers. Each of these Project features would reduce its energy consumption from non-renewable resources. Additionally, the Project would be a relatively minor energy consumer compared to other local and regional users. As provided by the California Energy Commission, Riverside County consumed approximately 17,780gigawatt hours of electricity in 2022 (CEC 2022), and the Project is anticipated to consume 79.61 gigawatt hours per year.[3] As such, while a portion of the energy used would be provided by nonrenewable sources during operation, the commitment of non-renewable resources would be modest and expected to continue to decline during Project operation.

Once constructed, petroleum consumption would occur due to passenger vehicle and delivery truck demand during operations. Further, approximately 1,499,695 thousand British thermal units of natural gas per year would be used on site for restaurant land uses. However, the Project would prohibit the installation of natural gas infrastructure in all residential and nonresidential buildings except for restaurant land uses, minimizing natural gas use. For these reasons, the natural gas consumption of the Project would not be considered inefficient or wasteful, and impacts would be less than significant. In sum, the Project would not be considered to result in a significant irreversible environmental effect.

6.5 Mandatory Significance Findings

Section 15065(a)(1) of the CEQA Guidelines states that "a lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur: (1) substantially degrade the quality of the environment; (2) substantially reduce the habitat of a fish or wildlife species; (3) cause a fish or wildlife population to drop below self-sustaining levels; (4) threaten to eliminate a plant or animal community; (4) substantially reduce the number or restrict the range of an endangered, rare or threatened species; (5) or eliminate important examples of the major periods of California history or prehistory." The Project would have less than significant impacts to biological resources as discussed in Section 4.4, Biological Resources, of this SEIR. Section 4.4 addresses impacts that might relate to the reduction of fish or wildlife habitat or populations and the reduction or restriction of the range of special-status species as a result of Project implementation. Further, the Project would have a less than significant

[3] 1 megawatt-hour = 0.001 gigawatt hours

impact with mitigation to cultural and tribal cultural resources, as discussed in Sections 4.5 and 4.18, respectively. These sections address impacts that might relate to California history or prehistory.

The Project would result in significant and unavoidable impacts to air quality resulting from conflicts with the South Coast Air Quality Management District's 2022 air quality management plan and exceedance of criteria air pollutant operational thresholds. The Project would not result in growth inducing impacts, nor would it result in significant and irreversible effects to the environment.

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7 Alternatives

7.1 Introduction

The following chapter provides an analysis of alternatives to the Aquabella Specific Plan Amendment Project (Project) pursuant to the California Environmental Quality Act (CEQA) Guidelines. In developing the alternatives to be addressed in this chapter, consideration was given to the ability to meet the basic objectives of the Project, which are listed in the Project Description section and Section 7.1.2 below, and to eliminate or substantially reduce the identified significant environmental impacts, identified in Section 7.1.3 below. This chapter also provides a matrix summarizing and comparing the impacts of each Project alternative (Section 7.5), as noted in the CEQA Guidelines Section 15126.6(d).

7.1.1 Purpose and Scope

Pursuant to the CEQA Guidelines, an EIR is required to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project." (14 CCR Section 15126.6[a]). An EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR Section 15126.6[a]). An EIR "must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation" (14 CCR Section 15126.6[a]). The alternatives discussion is required even if the alternatives "would impede to some degree the attainment of the project objectives, or would be more costly" (14 CCR Section 15126.6[b]). Although an EIR should focus on alternatives that will reduce or avoid environmental impacts, an EIR may also present alternatives that will provide greater project benefits at increased environmental cost, such as an alternative involving increased project density or intensity. (*Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912; [EIR referencing increased density alternative]; *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704 [same].)

The range of alternatives is guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are included (14 CCR Section 15126.6[f]). The EIR need only examine alternatives that could feasibly attain most of the basic objectives of the project. "Among the factors that may be taken into account when addressing feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries … and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site." (14 CCR Section 15126.6[f][1]).

The inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is "feasible." The final decision regarding the feasibility of alternatives lies with the decision maker for a given project, who must make the necessary findings addressing the potential feasibility of an alternative, including whether it meets most of the basic project objectives or reduces the severity of significant environmental effects pursuant to CEQA (California Public Resources Code Section 21081; see also 14 CCR Section 15091).

Beyond these factors, the Guidelines require the analysis of a "No Project" alternative and an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is also to be designated. If the environmentally superior alternative is the "No Project" alternative, the EIR must identify an environmental superior alternative among the other alternatives.

7.1.2 Project Objectives

This statement of Project objectives has been established for the Specific Plan (Amendment Project). The overall Project objective is to continue to implement the Aquabella project, as modified, as a vibrant residential and mixed-use planned community consistent with City General Plan goals and objectives. The 2006 General Plan identified eight "ultimate" goals, and through the 2040 General Plan Update (adopted, June 15, 2021), the City refreshed its vision and guiding principles to respond to new economic, technological, social, demographic, regional, and global challenges and opportunities. The following Project objectives govern:

1. Create a residential and mixed-use planned community framework within the center of the City that contributes to a distinct downtown center core consistent with the General Plan.
2. Provide a broad mix of multi-family residential housing options for all ages and income levels within the center of the City to address the needs of the City's existing and future residents, including those employed by adjacent and proximate health care, education, and logistics fields, in order to reduce long commutes to other distant job centers, achieve a better jobs-to-housing balance, and facilitate housing and job growth in central Moreno Valley.
3. Focus new residential, mixed-use, and retail/commercial uses within the City's Downtown Center and provide inviting uses to build Moreno Valley's sense of place, promote visitor-serving uses (e.g., Town Center, hotel), and take advantage of the site's sustainable lakes, lake promenade, and other amenities.
4. Utilize currently undeveloped land situated within the Center of the City' to foster vibrant gathering places, diversify the local economy, and implement livable sustainable mixed-use neighborhoods where people can live, work, recreate, and shop.
5. Implement the delivery of efficient public facilities and services (e.g., schools, parks, trails, police/fire), support frequent and reliable transit service and other multi-model transportation measures, promote walking and biking, and reduce vehicle miles travelled by taking advantage of a site approximating the size and scale of the previously-adopted Aquabella Specific Plan.
6. Focus on maintaining and enhancing an efficient transportation network within central Moreno Valley, including automobile travel, transit, pedestrian and bicycle routes, car/van pools, electric vehicles, transportation network companies (Uber and Lyft), intelligent transportation systems, transportation demand management measures, and shuttles to adjacent and proximate major job centers (e.g., Riverside University Health System Medical Center, the Kaiser Permanente Hospital and medical complex, Moreno Valley College, and the World Logistics Center).
7. Maintain and strengthen the quality of life in central Moreno Valley with quality schools, parks, multi-use trails, responsive public services, and reliable utility infrastructure.
8. Assist the City in meeting and exceeding its local and regional housing needs.

7.1.3 Significant and Unavoidable Project Impacts

Implementation of the Project would result in significant and unavoidable impacts to air quality related to conflict with the SCAQMD 2022 AQMP, and due to exceedance of criteria air pollutant operational thresholds established by the SCAQMD for volatile organic compounds (VOC), oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter $(PM)_{10}$, and $PM_{2.5}$. The Project would result in emissions of criterial pollutants VOC and NO_x in exceedance of the criteria air pollutant construction thresholds established by SCAQMD, as well as emissions of PM_{10} and $PM_{2.5}$, in exceedance of the applicable SCAQMD localized significance thresholds, resulting in potential

exposure to sensitive receptors during construction. The Project would also result in a potential impact related to construction TAC health risk impacts. However, the Project is subject to SCAQMD rules and regulations, including Rule 401, Rule 402, Rule 403, Rule 431.2, Rule 445, Rule 1110.2, Rule 1113, and Rule 1138. The Project would implement mitigation measures **MM-AQ-1** through **MM-AQ-11**, which would reduce construction-generated criteria air pollutant emissions below the SCAQMD threshold and would reduce TAC health risk impacts to less than significant.

7.1.4 Significant Impacts of Project Mitigated Below Significance

Implementation of the Project would result in potentially significant but mitigated impacts related to biological resources, hydrology and water quality, hazards and hazardous materials, cultural resources, tribal cultural resources, paleontological resources, construction-related noise levels, and transportation.

7.2 Criteria for Selecting Alternatives

As discussed above, in selecting the Project alternatives developed for analysis in this chapter, the City has considered a range of reasonable alternatives to the Project, or to the location of the Project that would feasibly obtain the basic objectives of the Project and avoid or substantially lessen the significant effects of the Project (14 CCR Section 15126.6[c]).

The alternatives herein have been developed to reduce the identified significant and unavoidable impact related to air quality, as well as those significant impacts of the Project that would be reduced to less-than-significant levels with implementation of mitigation. The "No Project – No Development" and "Previously Approved Aquabella 2005 Specific Plan Amendment" alternatives are considered in compliance with CEQA (Alternatives 1 and 2). Alternative 1, the No Project – No Development Alternative assumes the Project would not be approved and there would be no development that would result in a change to existing conditions of the site. Alternative 1 may reflect that development is infeasible under current approvals or that there is more general lack of growth in the City, state, or region. Alternative 2, the Previously Approved Aquabella 2005 Specific Plan Amendment Alternative assumes the Project would not be approved and, instead, development consistent with the prior entitlements and criteria of the 2005 Aquabella SPA would occur. Alternative 7 has been identified as presenting greater project benefits, but at potentially increased environmental consequences.

7.3 Alternatives Considered but Rejected

An EIR is required to identify any alternatives that the lead agency considered but were rejected as infeasible and briefly explain the reasons for the rejection. According to the CEQA Guidelines, among the factors that may be used to eliminate an alternative from detailed consideration are the alternative's failure to meet most of the basic project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. The following discussion presents information on alternatives to the Project that were considered but rejected. These alternatives are not discussed in further detail and have been eliminated from further consideration.

7.3.1 Previously Considered and Rejected Alternatives

As stated, the Aquabella site has been the subject of prior environmental review under the 1999 Moreno Valley Field Station EIR and the 2003 Supplemental EIR. The 1999 Field Station EIR evaluated two alternatives, which

could have eliminated or reduced significant impacts to a level less than significant, namely, the "No Project" alternative and the "Development According to Current Land Use Designation" alternative. The lead agency considered and rejected these alternatives. The alternatives will not be discussed in further detail and have been eliminated from further consideration due to the passage of time, slightly different project features and assumptions, and failure to meet the current Project's basic project objectives. Additionally, the 2003 Supplemental EIR evaluated a "No Project" alternative and a "Reduced Density" alternative. The lead agency rejected both of these alternatives for similar reasons. These alternatives also will not be further considered. Both the 1999 Field Station EIR and the 2003 Supplemental EIR, which are incorporated herein by reference, are available for public inspection and review upon request to the City.

7.3.2 Only Commercial, Office, and Retail

This alternative would include the development of only commercial, office, and retail uses on the Project site. The Downtown Center, which comprises approximately 1,200 acres and includes the Aquabella site estimated at approximately 668.6 acres, includes an illustrative development program of approximately 3,350,000 square feet (see 2040 General Plan, Table LCC-3). The Aquabella site is roughly 53 percent of the acreage of the Downtown Center. Thus, the alternative assigns approximately 1.7 million square feet of non-residential uses under the illustrative development program for the Downtown Center (see Table LCC-3). Non-residential uses would include commercial, office, and retail land uses, and would generate job opportunities to meet existing need in the job market as well as generate new jobs. The development of 1.7 million square feet of non -residential uses (retail, commercial, office, and other miscellaneous uses) would create approximately 5,030 new jobs, based on different jobs factor for each sector (DTA 2024). This number of jobs would result in a potential demand of up to 2,995 residential units to house new employees (based on the persons per household rate of 2.78, with 0.50 worker per unit (DTA 2024). The 2,995 units could be met partially by existing stock but would likely require the development of additional housing. This alternative would not require a General Plan Amendment, but would require a Specific Plan Amendment to account for the increased intensity of commercial, office, and retail uses.

After considering the 2040 General Plan, and the Project's basic project objectives, this alternative was rejected by the lead agency because it would not meet the basic objectives of the Project related to continuing to implement the Aquabella Specific Plan; and it did not provide a mix of land uses and housing options within the City's Downtown Center, diversifying the local economy, and meeting and exceeding the City's local and regional housing needs as established by the RHNA and as addressed in the 2040 General Plan. Additionally, the alternative would not meet the basic objective of providing a broad mix of multi-family residential housing options within the Downtown Center. The lack of a broad mix of housing options would also worsen the jobs-to-housing ratio in the City, which is projected to provide more job opportunities in the buildout years and increase the demand on existing and projected housing. In contrast, the Project better accommodates the City's jobs-to-housing balance, which means that more Moreno Valley residents will be able to work locally, cutting down commute times, and allowing people to spend more time with family and friends in the community. Accordingly, this alternative has been rejected for not meeting the Project's basic project objectives.

7.3.3 Alternative Locations

Development of the Project on an alternate site was considered but rejected as infeasible and because an alternative site would not meet the Project's basic objectives. Further, the prior Aquabella Specific Plan has been approved, and portions of the Specific Plan, including internal circulation, infrastructure, and drainage improvements, have been implemented. This alternative also would not meet the overall Project objective to

continue to implement the Aquabella project, as modified, in the City's Downtown Center. Further, to relocate the entire Aquabella Specific Plan development to an alternate site would require contiguous, undeveloped land suitable for the construction of residential, commercial (office, retail, mixed-use) parks/open space, public facilities (e.g., school), and other amenities similar in size and scale to the current Project. Additionally, there are no known available contiguous sites of sufficient size in the Downtown Center that would provide similar infill development potential, or that could accommodate 15,000 residential units along with commercial, retail, and other land uses like the current Project.

Further, much of the Aquabella Specific Plan area has undergone grading; and to relocate the proposed development to another location within the Downtown Center would require extensive grading and increased environmental impacts related to construction, giving rise to potentially significant environmental impacts. Moreover, the Project applicant does not currently own or control any alternative site within the Downtown Center that could accommodate development of the size and scale proposed for the current Project. Costs associated with an alternative site location would also likely be significantly higher than the current Project due to large-scale land acquisition costs, higher costs of acquiring residentially designated land, and potential demolition and redevelopment costs. Further, the City as lead agency has made the broad policy-level decision to allow for development at the current Project site. While that policy-level decision could change, it is a factor in evaluating the infeasibility of other alternative locations within the City's Downtown Center. For all these reasons, an alternative location was considered and rejected from further analysis as infeasible.

7.4 Alternatives Analyzed

This section evaluates seven alternatives to the Project:

1. Alternative 1: No Project - No Development (Zero Units/No Development)
2. Alternative 2: Previously Approved Aquabella 2005 Specific Plan Amendment (2,702 Units)
3. Alternative 3: 2040 General Plan Downtown Center (2,702 Units/1,804,000 sf commercial/retail)
4. Alternative 4: Reduced Density -10,000 Units
5. Alternative 5: Reduced Density -7,500 Units
6. Alternative 6: Increased Commercial
7. Alternative 7: Increased Density 20,000 Units

These alternatives are summarized below and compared with the Project. For each alternative, a brief description is presented, followed by a summary impact analysis relative to the significant impacts of the Project analyzed in Chapter 4. As shown above, the alternatives presented consider a reasonable range of primarily residential and mixed-use development. The residential range runs from zero, 2,702, 7,500, 10,000, 15,000 (current Project), and 20,000 dwelling units. In many cases, the Project and a project alternative may share the same level of significance (i.e., both alternatives would result in a potentially significant impact). Though the alternatives may share the same or similar level of significance under CEQA, the actual degree of impact may be different, in which case the difference may act as the basis for a conclusion of greater or lesser impacts compared to the Project. An assessment of the feasibility of each alternative and degree to which each alternative would meet Project objectives is also provided.

An environmentally superior alternative is identified among the alternatives evaluated in this Draft SEIR. An alternative would be environmentally superior to the Project if it would result in fewer or less significant

environmental impacts while achieving most of the basic Project objectives. The environmentally superior alternative is provided at the end of this chapter.

7.4.1 Alternative 1: No Project - No Development

Alternative 1: No Project - No Development is the a "No Project" alternative pursuant to CEQA Guidelines Section 15126.6(e). The Project site would retain its land use entitlements under the 2005 SPA Amendment but would remain undeveloped under existing conditions and no physical development would occur. Under this alternative, development activities related to construction and operation of residential, commercial, recreational, and all other proposed onsite improvements would not occur. In the short term, the Project site would remain vacant and not developed. Maintenance activities, weed abatement, and management of the Line F riparian mitigation channel would continue to occur. Changing market conditions may prevent the Project site to be developed as currently entitled and may extend the current existing conditions into the future. While this alternative is similar to Alternative 2: Previously Approved Aquabella 2005 Specific Plan Amendment, the alternative considers the possibility that current land use entitlements do not match up with current market demands and preclude future development of the Project site. This alternative also does not require any action on the part of decision makers, but it represents a possible outcome of the use of the Project site. As such, Alternative 1: No Project – No Development was considered a viable alternative for analysis purposes. This alternative would not require a General Plan Amendment, Specific Plan Amendment, or any other City project approvals.

Air Quality

Alternative 1 would have significantly reduced impacts related to air quality compared to the Project. Alternative 1 would not implement any development and thus would not result in any physical construction. Therefore, this alternative would not result in a conflict with the SCAQMD AQMP, nor any impacts related to exceedances of criteria air pollutant construction thresholds established by the SCAQMD for VOC and NO_x emissions. Further, because no housing, commercial, roadways, recreational, or Downtown Center development would be implemented, there would not be significant and unavoidable impacts due to exceedances of established thresholds for emissions of VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$ related to operational pollutant emissions. Because the site is graded and would remain undeveloped under this alternative, Alternative 1 may result in additional fugitive dust compared to the Project. Generally, because no development would occur under this alternative, air quality impacts would be significantly reduced compared to the Project (and less than significant). Generally, because no development would occur under this alternative, air quality impacts would be less than significant and substantially reduced compared to the Project.

Biological Resources

Alternative 1 would result in reduced impacts to biological resources compared to the Project. Because no physical development or construction activities would occur as a result of Alternative 1, there would be no potential impact to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code when compared to the current Project. However, Project impacts to biological resources are generally minimal in light of the prior uses and grading of the site. Alternative 1 would result in reduced impacts to biological resources compared to the Project.

Cultural, Paleontological, and Tribal Cultural Resources

Alternative 1 would result in reduced impacts related to cultural, paleontological, and tribal cultural resources compared to the Project. Alternative 1 would not result in ground disturbance of shallow or deep soils as a result of

construction activities. Thus, Alternative 1 would not have the potential to effect identified or previously unidentified cultural, paleontological, or tribal cultural resources, and impacts would be reduced. No impacts to cultural, paleontological, or tribal cultural resources would occur.

Greenhouse Gas Emissions

Alternative 1 would result in reduced impacts related to GHG emissions when compared to the current Project. Because there would be no physical development of the Project site under Alternative 1, there would be no new sources of GHG emissions associated with construction or operational activities. Therefore, Alternative 1 would not result in impacts from GHG emissions, and such impacts would be reduced compared to the Project.

Hazards and Hazardous Materials

Alternative 1 would result in reduced impacts related to hazards and hazardous materials when compared to the current Project. Alternative 1 would not result in ground disturbance of shallow or deep soils as a result of construction activities. Thus, Alternative 1 would not have the potential to encounter and expose potentially hazardous materials to the public or the environment through ground-disturbing construction activities. Alternative 1 also would not include the cleanup of potentially contaminated soils, buried trash, or well decommissioning, which clean-up and closure actions the Project would be required to resolve (**MM-HAZ-1, MM-HAZ-2, MM-HAZ-4**.) Overall, Alternative 1 would not result in hazards or hazardous materials impacts, which would represent reduced impacts compared to the Project.

Hydrology and Water Quality

Alternative 1 would result in reduced impacts related to hydrology and water quality when compared to the current Project. Alternative 1 would not include implementation of the lake system, nor require the use of the two onsite wells. As such, Alternative 1 would not have the potential to encounter groundwater that does not meet water quality standards for surface water deposition, and would not require mitigation related to the potential degradation of surface or groundwater quality. Therefore, Alternative 1 would not result in hydrology or water quality impacts, and such impacts would be reduced compared to the Project.

Noise

Alternative 1 would result in reduced impacts related to noise impacts when compared to the current Project. Because no physical development would occur as a result of Alternative 1, there would be no potential impacts related to ambient noise increases to sensitive receptors in the vicinity of the Project site during construction or operational activities. No mitigation would be necessary related to reducing potential ambient noise increases to sensitive receptors. As such, Alternative 1 would not result in noise impacts, and such impacts would be reduced compared to the Project.

Feasibility

The Project site could feasibly remain undeveloped due to economic conditions which possibly may result in the abandonment of the Previously Approved Aquabella 2005 Specific Plan Amendment. However, it is not economically viable for the Project applicant, nor beneficial to the City (*e.g.*, no public benefits, no mixed-use urban core, no much-needed housing) if such abandonment were to occur. Further, the 2040 General Plan designates

the site for Downtown Center development; and this alternative would not be consistent with the General Plan land use designation, or further the City's General Plan goals and policies for the area.

Project Objectives

Alternative 1 would not meet any of the Project objectives (Objectives 1-8) because it would not provide any residential housing, new schools, high quality parks, trails, other recreation facilities, or a Downtown Center, as envisioned by the 2040 General Plan. Therefore, this alternative is considered infeasible because it would not achieve the Project objectives nor the vision of the 2040 General Plan.

7.4.2 Alternative 2: Previously Approved Aquabella 2005 Specific Plan Amendment

Alternative 1: Previously Approved Aquabella 2005 Specific Plan Amendment Alternative is also a "No Project" alternative pursuant to Section 15126.6I of the CEQA Guidelines and examines the environmental effects that would occur if development occurred under the previously approved 2005 Aquabella SPA. Under this alternative, build out of the remainder of the Aquabella Specific Plan area would occur as currently approved. This would include the development of up to approximately 2,922 single-family and multifamily homes with approximately 2,702 age-restricted dwelling units as part of a gated, active-adult community (55 years of age and older). It would also include 25 acres of commercial development, 40 acres of lakes, clubhouse facilities, a potential 300-room hotel facility, trail and bicycle paths, and other amenities. The 2005 Aquabella SPA included the realignment and widening of Nason Street, which has been completed. As stated, the 2005 Aquabella SPA also included 220 non-age restricted units, which have been completed. Further, approximately 16.3 acres of open space/drainage channel facilities and 50.6 acres of circulation corridors would continue to be implemented.

Compared to the Project, this alternative would not require a General Plan Amendment, Change of Zone, Specific Plan Amendment, or further CEQA review, but may require additional mapping and/or plan review and approval.

Air Quality

The 2005 Addendum indicated that the age-restricted active adult development would generate approximately 55% less traffic than the previous Specific Plan concept, and therefore, long-term criteria air pollutant emissions would be similarly reduced. However, even with a reduction in emissions, the impact would remain significant and unavoidable even with implementation of all feasible mitigation measures as outlined in the original 1999 Field Station EIR, as updated by the 2005 Addendum.

To mitigate mobile source emissions, the 1999 Field Station EIR planned to incorporate emission reduction measures such as on-site transit stop, mixed retail and employment new residential uses, and energy conservation measures for buildings. These mitigation measures reduced the emission impact to less than significant.

Strategies to minimize the degree of inconsistency with the AQMP outlined in the 1999 Field Station EIR included various transportation control measures to reduce smog and traffic congestion by cutting motor vehicle trips and miles traveled. Regional strategies to reduce single occupant ridership and vehicle miles traveled were beyond the scope of the project to implement, and therefore, impacts remained significant.

Alternative 2, as analyzed in the 2005 Addendum, would result in a significant unavoidable impact related to mobile source emissions and inconsistency with the AQMP. The Project would result in a significant and

unavoidable impact related to exceedance of emissions thresholds due to construction activities, exceedance of emissions thresholds due to operational activities, and inconsistency with the AQMP. As compared to the current Project, Alternative 2 would result in similar construction impacts as the same or similar development footprint is proposed over a similar buildout timeframe (10 years with Alternative 2 compared to 12-15 years with the Project). However, operational emissions would be reduced as a result of fewer vehicle trips associated with the reduced and age-restricted units. Therefore, Alternative 2 would result in reduced impacts compared to the current Project, but would not likely reduce impacts related to air quality below significance, even with the implementation of all feasible mitigation measures.

Biological Resources

Alternative 2, as analyzed by the 2005 Addendum, would result in less-than-significant impacts with mitigation incorporated related to sensitive biological resources. Since approval of the 2005 Addendum, the site has been substantially graded and several of the proposed mitigation measures have been implemented, including completion of the Line F riparian mitigation channel the payment in full of the Kangaroo Rat Habitat Conservation Plan Development Mitigation Fee. The Project proposes development within the same footprint as the previously approved 2005 Aquabella SPA and would not result in additional impacts to biological resources. Therefore, due to the previously implemented mitigation measures that would reduce potential impacts to biological resources related to construction activities within the Project footprint, the Project and Alternative 2 would result in similar, less-than-significant impacts to sensitive biological resources.

Cultural, Paleontological, and Tribal Cultural Resources

The 2005 Addendum found the impacts from the 2005 Aquabella project would be consistent with the 1999 EIR. The City established procedures that would also mitigate impacts to unknown cultural resources discovered during grading. The 1999 EIR identified no archaeological, historical, or cultural sites or significant features in the Project area. An archaeological and historical survey was conducted by RECON (October 1992) for the Specific Plan area, which found the entire area had been disturbed by agricultural activities. The 1999 EIR stated the potential for significant cultural resources occurring on the property would be low. Impacts to cultural resources were found to be less than significant.

The Project would similarly result in less-than-significant impacts with mitigation incorporated to address the potential to encounter previously unidentified cultural resources during grading or other ground-disturbing activities. Alternative 2 and the Project would develop substantially the same development footprint, with similar likelihood of encountering culturally significant features. While the Project would slightly expand the development footprint compared to Alternative 2, the practices outlined in **MM-CUL-1** through **MM-CUL-9** and **MM-GEO-1** are considered industry standard and would reduce Project impacts to less-than-significant levels. Similarly, **MM-CUL-1** through **MM-CUL-9** and **MM-GEO-1** would likely be implemented with Alternative 2, as well, if it were to be constructed today. As such, implementation of Alternative 2 would result in similar but slightly reduced potential impacts compared to the current Project.

Greenhouse Gas Emissions

Alternative 2 would result in reduced GHG emissions from construction-related vehicles and activities due to the reduced residential development. Alternative 2 would also result in reduced GHG emissions related to operations of the alternative due to fewer residential units and reduced vehicle trips resulting from operation of Alternative 2. As such, Alternative 2 would result in reduced impacts related to GHG emissions compared to the current Project, which would, like the Project, be less than significant.

Hazards and Hazardous Materials

The 2005 Addendum described a project comparable in size to the 1999 EIR and, therefore, identified impacts related to hazards or hazardous materials as less than or equal to those identified in the 1999 EIR. The 1999 EIR did not identify any potentially significant impacts related to hazards or hazardous materials. However, implementation of Alternative 2 would include construction of the onsite lake system and the option to fill the lakes with groundwater from onsite wells. Due to the location of the onsite wells and past well water testing, there is a potential to encounter groundwater with elevated levels of certain contaminants of concern beyond the established standards for surface water. Therefore, implementation of Alternative 2, similar to the Project, would require the implementation of mitigation measures to reduce the potential to degrade water quality of surface or groundwater through the use of the onsite wells. As such, impacts would be similar to the current Project.

Hydrology and Water Quality

The 2005 Addendum determined that impacts to hydrology and water quality were less than those described in the previous analyses (1999 EIR and 2003 Supplemental EIR). The 2005 Addendum discussed the requirement to submit a Water Quality Management Plan (WQMP) for review and approval by RWQCB to ensure that there were no significant long-term or short-term impacts to water quality.

The 2005 Addendum also required that the developer submit improvement plans for the lakes and any related flood control improvements to the Riverside County Flood Control and Water Conservation District and the California Department of Fish and Wildlife for review and approval prior to grading. The 2005 Addendum produced fewer impacts on water resources compared to the 1999 EIR; therefore, that project would not result in new, significant, or substantially greater, impacts to hydrology and water quality beyond those identified in the 1999 EIR.

Alternative 2 would include the construction of the onsite lake system and the option to fill the lakes with groundwater from onsite wells. Due to the location of the onsite wells and past well water testing, there is a potential to encounter groundwater with elevated levels of certain contaminants of concern beyond the established standards for surface water. Therefore, implementation of Alternative 2, like the Project, would require the implementation of mitigation measures to reduce the potential to degrade water quality of surface or groundwater through the use of the onsite wells. As such, impacts associated with implementation of Alternative 1 would be similar to those associated with the current Project.

Noise

The 2005 Addendum includes a traffic study that indicated that the age-restricted active adult development would generate approximately 55% less traffic than the original SP 218; and therefore, long-term noise impacts generated from vehicular traffic would be reduced. The 2005 Addendum concluded that impacts to noise from implementation of the 2005 Aquabella SPA would be less than or equal to those from the original SP 218.

The 1999 EIR determined that portions of the proposed residential development areas adjacent to major arterials could be exposed to traffic noise levels that exceed exterior noise level standards or could cause an exceedance in interior noise level standards. The original SP 218's proposed high school and elementary school had the potential to exceed outdoor and indoor City noise level standards. Portions of the original SP 218's community park were determined to also be exposed to exterior noise levels that exceed the City's standards (City of Moreno Valley 1999).

Implementation of the original SP 218's proposed middle school, golf course, commercial uses, and office uses did not result in significant noise impacts. In addition, as described in the 1999 Field Station EIR, traffic generated from

the original SP 218 would not create significant increases in noise levels along the surrounding off-site circulation system roadways (City of Moreno Valley 1999).

To mitigate the potential noise impacts to existing residential development areas, the original SP 218 proposed 6-foot-high masonry walls separating the residential areas from the roads. The City was then required to verify that future residents would not be impacted under the City's noise standards by conducting an acoustic analysis to be reviewed by the City's Community Development Department (City of Moreno Valley 1999). Impacts were determined to be less-than-significant with incorporation of mitigation measures.

The analysis of the Project identified potential impacts associated with construction and traffic-related noise levels. MM-NOI-1 and MM-NOI-2 would be implemented to reduce construction-related noise impacts, and MM-NOI-3 would be implemented to reduce traffic-related noise impacts. With incorporation of mitigation, potential impacts would be reduced to less than significant. In comparison to the current Project, Alternative 2 would result in similar, less-than-significant operational and traffic-related noise impacts after incorporation of mitigation measures. Alternative 2 would involve a similar development footprint and construction phasing, but a reduced scale of construction, such that noise-related construction impacts would be similar to the Project.

Feasibility

Alternative 2 is feasible due to its consistency with the existing 2005 Aquabella SPA. However, the current Project proposes to amend the 2005 Aquabella SPA because the Project applicant, in conjunction with the City, has determined it is no longer feasible or desirable to develop an age-restricted community at this location. Alternative 2 has not been substantially developed since its approval. As such, it is unlikely that buildout would occur under this alternative unless the economic and market conditions in the area changed substantially. Further, Alternative 2 is infeasible because it does not satisfy the Project's basic objectives (see Section 7.1.2, above, and discussion, below).

Project Objectives

This Alternative would meet Objectives 1, 3, and 4, but to a lesser extent compared to the current Project as fewer residences would be built to create and sustain a mixed-use downtown core. Alternative 2 would partially meet Objective 7, because while it would support the maintenance and growth of community-serving facilities, such as parks and recreational facilities, it would not provide schools. This alternative would also not meet Objective 8, because although it would provide housing, it would not keep pace with the projected demand for housing and provide only a fraction of the needed housing to meet existing and projected demand due to the age-restricted availability of the housing units.

Further, Alternative 2 would not meet Objectives 2, 5, or 6. Alternative 2 would not provide a broad mix of residential housing options as stated in Objective 2; instead, the alternative would provide primarily age-restricted single-family housing units. Alternative 2 would not meet Objectives 5 or 6 because it would not include integrated infrastructure improvements to connect multi-modal transportation and public transit options, nor does it support intelligent transportation systems or carshare/bikeshare facilities. Further, schools would not be provided due to the age-restricted component of Alternative 2.

7.4.3 Alternative 3: 2040 General Plan Downtown Center (2,702 Units/1,804,000 sf)

This alternative would consist of developing the Project site pursuant to its land use designation under the 2040 General Plan, which is designated as Downtown Center, as well as the abandonment of Previously Approved Aquabella Specific Plan Amendment. This development would consist of approximately 2,702 residential units, 808,000 square feet of commercial uses, 781,000 square feet of office space, and 215,000 square feet of retail. This alternative would not require a General Plan Amendment (provided the 2040 General Plan is in effect), but it would require a Specific Plan Amendment to increase the acreage of commercial land uses (previously 25 acres) to accommodate the substantially greater 1,804,000 square feet of commercial, office, and retail uses. It would also require tentative tract map or site plan approval by the City, as well as further CEQA review.

Air Quality

Compared to the Project, Alternative 3 would reduce the number of residential units, substantially increase commercial, office, and retail space, and reduce recreational uses (due to no proposed lake system).

The reduced number and density of residential units would reduce sources and amounts of criteria current air pollutant emissions due to decreased intensity of construction activities associated with new residential buildings. However, the increase in commercial, retail, and office square footage would increase the sources and amounts of emissions resulting from the construction of commercial, retail, and office buildings. Therefore, while certain sources of criteria pollutant emissions would be reduced related to construction of residential units, other sources would be increased due to the increased development of commercial, office, and retail uses. Like the Project, incorporation of mitigation measures **MM-AQ-1** through **MM-AQ-11** would be needed to reduce construction-generated criteria air pollutant emissions below the SCAQMD threshold, and to reduce TAC health risk impacts to less than significant. Construction-related criteria pollutant emissions would be similar compared to the current Project.

Alternative 3's reduced number and density of residential units would reduce the operational emissions of criteria pollutants VOC NO_x, CO, PM_{10}, and $PM_{2.5.}$ However, Alternative 3's increased square footage of commercial, office, and retail uses would increase the number of visitors to the Project site, and consequently, the vehicle miles traveled. Vehicle miles traveled is directly related to the emissions of criteria pollutants VOC NO_x, CO, PM_{10}, and $PM_{2.5.}$ As such, the reduction of emissions associated with fewer residents would be counterbalanced by the increase of emissions related to induced vehicle miles traveled associated with the increased commercial, office, and retail uses. This would result in similar emissions of criteria air pollutants above the operational thresholds established by the SCAQMD. Further, the increase in commercial uses may increase the number of truck trips to/from the site, further increasing criteria pollutant emissions such as diesel PM. Even with the incorporation of mitigation measures, Alternative 3's potential significant impact related to operational criteria pollutant emissions would remain significant and unavoidable. Thus, Alternative 3 would result in similar impacts related to operational criteria pollutant emissions as the current Project.

Therefore, impacts associated with air quality would be similar under Alternative 3 when compared to the current Project, and still result in significant impacts, even with the incorporation of mitigation measures.

Biological Resources

Alternative 3 would result in similar impacts to biological resources when compared to the current Project. Because the entire Project site would be developed under Alternative 3, and construction activities would be generally the same under Alternative 3, the potential impact to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code during construction would remain. Mitigation Measures **MM-BIO-1** through **MM-BIO-4** would similarly be required to ensure compliance with the MSHCP and the Moreno Valley Municipal Code concerning tree replacement. Alternative 3 would not, however, implement the Project's extensive tree planting of 30,000 trees (PDF-AQ/GHG-11) nor provide the lake system. Nonetheless, implementation of Alternative 3 is considered to result in similar impacts to biological resources compared to the Project.

Cultural, Paleontological, and Tribal Cultural Resources

Alternative 3 would result in similar impacts to cultural, paleontological, and Tribal cultural resources when compared to the current Project. The Project footprint subject to development under Alternative 3 would be substantially the same as the Project, such that ground-disturbing construction activities would be generally the same under Alternative 3, and the potential impact to previously undiscovered cultural, paleontological, or Tribal cultural resources during construction would remain. Mitigation (**MM-CUL-1** through **MM-CUL-9** and **MM-GEO-1**) would also be required to reduce potential impacts to less-than-significant levels. Therefore, implementation of Alternative 3 would result in similar impacts to cultural, paleontological, and Tribal cultural resources compared to the Project.

Greenhouse Gas Emissions

Alternative 3 would have reduced residential units compared to the Project, which would reduce potential GHG emissions associated with residential units and future project residents (including transportation-related emissions). However, the increased development of commercial, office, and retail uses under Alternative 3 would result in increased GHG emissions related to these uses, including induced vehicle miles traveled from visitors and employees traveling to the Project site, truck emissions, and commercial/office/retail building and operational emissions. Alternative 3 would be required to demonstrate consistency with the City's CAP. Unlike the Project, this Alternative would have the opportunity to tier-off of that document as the development has been included in the growth assumptions of the plan. Like the Project, Alternative 3 would be required to demonstrate consistency with the 2022 CARB Scoping Plan Update, or to adopt mitigation similar to the project design features and mitigation measures in order to reduce any identified significant impact. As such, Alternative 3 is anticipated to result in similar GHG emission impacts compared to the Project. Alternative 3 would not exceed the residential and population projections in the SCAG 2020–2045 RTP/SCS. However, it may result in exceedances of job projections in the RTP/SCS, which projects 83,200 jobs in the City by 2040 (approximately 1,767 new jobs in the City per year). Alternative 3's commercial uses may exceed this number, as the 2040 General Plan predicted a total 84,453 jobs with its implementation. While Alternative 3 may slightly exceed the job growth assumptions of the 2020-2045 RTP/SCS, project design features and mitigation measures to reduce mobile source emissions would be anticipated to achieve consistency with RTP/SCS goals and policies. . Therefore, Alternative 3 would result in similar GHG impacts compared to the Project.

Hazards and Hazardous Materials

Alternative 3 would result in slightly reduced impacts to hazards and hazardous materials compared to the current Project. Because Alternative 3 would result in development across the entire Project site and involve similar ground-

disturbing construction activities, Alternative 3 would result in potential impacts related to the accidental release of hazardous materials from onsite impacted soils and soil vapor. Mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HAZ-1**, **MM-HAZ-2** and **MM-HAZ-4**). However, under Alternative 3, the lake system would not be constructed or operated, which would reduce the potential impacts related to the release of potentially contaminated groundwater from the to surface water. **MM-HAZ-3** would not be required under Alternative 3. Therefore, impacts from implementation of Alternative 3 would be slightly reduced related to hazards and hazardous materials from the Project.

Hydrology and Water Quality

Alternative 3 would result in reduced impacts to hydrology and water quality compared to the Project. Alternative 3 would not include the construction, filling, and maintenance of the lake system with the use of the onsite groundwater wells as proposed by the Project. Thus, Alternative 3 would not result in potential impacts related to the potential to degrade surface water quality or the potential to substantially impact groundwater supply, and mitigation **MM-HYD-1, MM-HYD-2,** and **MM-HAZ-3** would not be required. Potential impacts related to formerly used irrigation on site would still be present, and **MM-HAZ-4** would be required to reduce this potential impact under Alternative 3. Therefore, Alternative 3 would result in a less-than-significant impact related to hydrology and water quality, but because the lake system would not be developed under this alternative, it would result in reduced impacts compared to the Project.

Noise

Alternative 4 would result in a reduced number of residential units and a reduced number of future project residents upon buildout, but would result in an increase in commercial, office, and retail land uses compared to the current Project. As such, construction-related noise impacts to sensitive receptors could be anticipated to be generally the same as the Project, because construction would occur across the Project site at a similar level of intensity. Additionally, construction would be anticipated to include the same type of equipment and involve similar construction phasing. As such, the potential impact to sensitive receptors as a result of construction noise could occur, and implementation of **MM-NOI** and **MM-NOI-2** similar to the Project would be required to reduce potential impacts to a less-than-significant level. Further, while a slightly reduced future population would reduce traffic noise from residents, an increase in commercial, office, and retail uses would result in an increase of traffic noise from visitors and employees compared to the Project, which would counter the potential reduction related to residential traffic. Potential traffic noise-related impacts to ambient noise levels would require implementation of **MM-NOI-3** to reduce impacts to less-than-significant levels. Therefore, Alternative 3 would result in similar impacts compared to the Project.

Feasibility

Alternative 3 could be developed under current conditions. However, it is uncertain whether 1,804,000 square feet of commercial uses on the site under Alternative 3 is desirable or economically feasible. Further, this alternative does not adequately achieve the Project Objectives, and would have similar environmental impact to the Project.

Project Objectives

Alternative 3 would only partially meet Objectives 1 and 7 because, while Alternative 3 would support the maintenance and growth of community-serving facilities such as parks and recreational facilities, it would not provide for the development of schools, and would instead devote the majority of land for commercial, office, and

retail space. This alternative would not meet Objectives 2, 5, 6 or 8 to the same extent as the Project as the 2,702 residential units would not provide a broad mix of housing or efficiently use the site in a manner that best takes advantage of its infill location in the Downtown Center to the same level as the current Project. Alternative 3 would not meet Objectives 5 and 6 to the same extent as the Project due to lower level circulation and connectivity with local and regional employment centers and public transit hubs. This Alternative would not meet Objective 8, because although the alternative would provide housing, it would not keep pace with the projected demand for housing and only provide a fraction of needed housing to meet the demand. Alternative 3 would partially meet Objective 3, because it would be developed in such a manner to provide for a vibrant downtown center; however, the land uses as identified in the 2040 General Plan Land Use Element do not identify a lake or promenade. This alternative would meet Project Objective 4 because it would provide for implementation of a Downtown Center, diversify the local economy, and implement a neighborhood development.

7.4.4 Alternative 4: Reduced Density - 10,000 Units

Alternative 4: Reduced Density - 10,000 Units would include development at a reduced density when compared to the current Project, with all other project features remaining the same. Specifically, Alternative 4 would include the development of approximately 10,000 residential units, which would result in an overall density of approximately 15 dwelling units/acre. The design of the proposed land use plan would remain the same, and the approximate location and density of other uses, including commercial, retail, and public facilities would remain the same as the Project. Additionally, 80 acres of parks, including 40 acres of lakes, would be developed. This would still include 25 acres of commercial uses. The proposed circulation system would remain consistent with the Project's proposed roadways and bikeways.

Air Quality

Alternative 4 would reduce the number of residential units when compared to the current Project from 15,000 units to 10,000 units. The reduced residential unit count would reduce the sources and amounts of criteria air pollutant emissions compared to the Project due to a decreased intensity of construction activities during project construction and implementation. However, this decrease would not be enough to reduce the emissions of VOC and NO_x during construction to be below the criteria air pollutant construction thresholds established by SCAQMD. Further, reduced intensity of construction activities would reduce the emissions of PM_{10} and $PM_{2.5}$, but not enough to reduce the emissions below the applicable SCAQMD localized significance thresholds, resulting in potential exposure to sensitive receptors during construction. Alternative 4 would also result in a slight decrease related to construction TAC health risk impacts, but would not result in significant enough decreases to reduce the impact to a less-than-significant level. However, like the Project, incorporation of Mitigation Measures **MM-AQ-1** through **MM-AQ-11** would reduce construction-generated criteria air pollutant emissions below the SCAQMD and reduce TAC health risk impacts to less than significant. As such, Alternative 4 would be anticipated to result in similar impacts related to construction air pollutant emissions compared to the Project.

The reduced unit count and reduced number of residents (and related trips) with Alternative 4 would reduce the emissions of criteria pollutants VOC NO_x, CO, PM_{10}, and $PM_{2.5}$. However, the reduction would not be enough to reduce the emissions below the criteria air pollutant operational thresholds established by the SCAQMD for these nonattainment criteria pollutants. Even with the incorporation of mitigation measures, the potential significant impact related to operational criteria pollutant emissions would remain significant and unavoidable. Thus, Alternative 4 would result in similar impacts to the Project related to operational criteria pollutant emissions.

Therefore, Alternative 4 would reduce impacts associated with air quality compared to the Project, but this alternative would still result in significant and unavoidable air quality impacts.

Biological Resources

Alternative 4 would result in similar impacts to biological resources when compared to the current Project. Because the same Project footprint would be developed under Alternative 4, and construction activities would be generally the same (although with a reduced intensity) under Alternative 4, the potential impact to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code during construction would remain. . Mitigation Measures **MM-BIO-1** through **MM-BIO-4** would similarly be required to ensure compliance with the MSHCP and the Moreno Valley Municipal Code concerning tree replacement. Therefore, implementation of Alternative 4 would result in similar impacts to biological resources compared to the Project.

Cultural, Paleontological, and Tribal Cultural Resources

Alternative 4 would result in similar impacts to cultural, paleontological, and Tribal cultural resources when compared to the current Project. Because the same Project footprint would be developed under Alternative 4, and ground-disturbing construction activities would be generally the same (although with a reduced intensity) under Alternative 4, the potential impact to previously undiscovered cultural, paleontological, or Tribal cultural resources during construction would remain the same or substantially similar to the Project. As with the Project, Mitigation Measures **MM-CUL-1** through **MM-CUL-19** and **MM-GEO-1** would be required to reduce potential impacts to less-than-significant levels. Therefore, implementation of Alternative 4 would result in similar impacts to cultural, paleontological, and Tribal cultural resources compared to the Project.

Greenhouse Gas Emissions

Alternative 4 would produce roughly the same or less potential GHG emissions associated with residential units and future project residents, including from transportation emissions, when compared to the current Project. Like the Project, Alternative 4 would be anticipated to implement project design features and mitigation measures to demonstrate consistency with the City's CAP and 2022 CARB Scoping Plan Update. Additionally, Alternative 4 would not conflict with the SCAG 2020–2045 RTP/SCS. Therefore, Alternative 4 would result in slightly reduced GHG emissions as compared to the Project, and result in the same less-than-significant impacts related to GHG emissions as the Project.

Hazards and Hazardous Materials

Alternative 4 would result in similar impacts to hazards and hazardous materials as the current Project. Because Alternative 4 would result in development with the same footprint as the Project, and would involve similar ground-disturbing construction activities, as well as the construction, filling, and maintenance of the proposed lake system, Alternative 4 would result in similar potential impacts related to the accidental release of hazardous materials from onsite impacted soils and soil vapor, buried landfill, and from the extraction of potentially contaminated groundwater and use as surface water for the lake system. Mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HAZ-1** through **MM-HAZ-4**). Therefore, the hazards and hazardous materials impacts from implementation of Alternative 4 would be similar when compared to the Project and be less than significant with mitigation incorporated.

Hydrology and Water Quality

Alternative 4 would result in similar impacts to hydrology and water quality as the current Project. Alternative 4 would include the construction, filling, and maintenance of the proposed lake system with the use of the onsite groundwater wells similar to the Project. Thus, Alternative 4 would result in potential impacts related to degradation of ground or surface water quality, and demand on groundwater supplies similar to the Project. Mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HYD-1**, **MM-HYD-2**, **MM-HAZ-2**, and **MM-HAZ-4**). Therefore, the hydrology and water quality impacts from implementation of Alternative 4 would be similar when compared to the Project and be less than significant with mitigation incorporated.

Noise

Alternative 4 would result in a reduced number of residential units when compared to the current Project. As such, construction-related noise impacts to sensitive receptors could be anticipated to be reduced slightly compared to the Project, due to a reduced intensity of construction. However, construction would be anticipated to include the same type of equipment and occur over the same phasing. As such, a potential impact to sensitive receptors as a result of construction noise could occur, and, as with the Project, implementation of Mitigation Measures **MM-NOI** and **MM-NOI-2** would be required to reduce potential impacts to less-than-significant levels. Additionally, due to a slightly reduced future population of residents on the Project site under Alternative 4, project-generated traffic noise impacts would be anticipated to be reduced slightly. However, potential traffic noise-related impacts to ambient noise levels may still occur, such that, as with the Project, **MM-NOI-3** would be required to reduce such impacts to less than significant. Therefore, potential noise-related impacts would be reduced compared to the Project, but would, like the Project, remain less than significant with mitigation incorporated.

Feasibility

Alternative 4 could be feasibly developed. However, this alternative does not fully achieve the Project Objectives.

Project Objectives

Alternative 4 would meet Project Objectives 1, 3, 4, 5, 6, and 7, but to a lesser extent when compared to the current Project, by providing residential units, schools, public services, commercial, and recreational uses, and creating a vibrant Downtown Center connected to Project features and regional job centers through internal circulation and connectivity. This alternative would partially meet Objectives 2 and 8, because the alternative would allow for development of up to 10,000 residential units, providing workforce housing for local and regional jobs; however, Alternative 4 would not contribute as many residential units towards the City's existing and projected housing goals. Further, the alternative would contribute fewer residential units toward the goal set forth in Objective 2, namely, to achieve a better balance of jobs-to-housing and facilitate housing and job growth in central Moreno Valley.

7.4.5 Alternative 5: Reduced Density - 7,500 Units

Alternative 5: Reduced Density – 7,500 Units would develop the Project site with 7,500 residential units, 25 acres of commercial uses, a 40-acre lake complex, 40 acres of parks, open space, and recreation, and 40 acres of schools. Alternative 5 would result in a reduced total number of residents and jobs (related to building maintenance, landscaping, schools, and other indirectly related employment opportunities) compared to the current Project.

Air Quality

Alternative 5 would reduce the number of residential units when compared to the current Project. Alternative 5 would develop 7,500 units on the Project site. The reduced number of residential units and residents would reduce the sources and amounts of criteria air pollutant emissions compared to the Project due to a decreased intensity of construction activities during project construction and implementation. However, this decrease would not be enough to reduce the emissions of VOC and NO_x during construction to be below the criteria air pollutant construction thresholds established by SCAQMD. Further, the reduced intensity of construction activities would reduce the emissions of PM_{10} and $PM_{2.5}$, but not enough to reduce the emissions below the applicable SCAQMD localized significance thresholds, resulting in potential exposure to sensitive receptors during construction. Alternative 5 would also result in a slight decrease related to construction TAC health risk impacts but would not result in significant enough decreases that would reduce the impact to a less-than-significant level. Like the Project, Mitigation Measures **MM-AQ-1** through **MM-AQ-11** would be needed to reduce construction-generated criteria air pollutant emissions below the SCAQMD thresholds and reduce TAC health risk impacts to less than significant. As such, Alternative 5 would result in similar construction air pollutant emission impacts as the Project with mitigation incorporated.

Alternative 5's reduced unit count and number of residents would reduce the operational and transportation-related emissions of criteria pollutants VOC NO_x, CO, PM_{10}, and $PM_{2.5}$ as compared to the current Project. However, the reduction would not be anticipated to be enough to reduce the emissions below the criteria air pollutant operational thresholds established by the SCAQMD for these nonattainment criteria pollutants. Even with the incorporation of mitigation measures, the potential significant operational criteria pollutant emission impact would remain significant and unavoidable. Thus, Alternative 5 would result in similar operational criteria pollutant emission impacts as the Project.

Therefore, impacts associated with air quality would be slightly reduced under Alternative 5 when compared to the Project, but, like the Project, Alternative 5 would continue to result in significant and unavoidable air quality impacts.

Biological Resources

Alternative 5 would result in similar impacts to biological resources when compared to the current Project. Because a similar Project footprint would be developed under Alternative 5, and construction activities would be generally the same although with a reduced intensity under Alternative 5, the potential impact to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code during construction would remain. Mitigation Measures **MM-BIO-1** through **MM-BIO-4** would similarly be required to ensure compliance with the MSHCP and the Moreno Valley Municipal Code concerning tree replacement Therefore, implementation of Alternative 5 would result in similar impacts to biological resources when compared to the Project.

Cultural, Paleontological, and Tribal Cultural Resources

Alternative 5 would result in similar impacts to cultural, paleontological, and Tribal cultural resources as compared to the current Project. Because a similar Project footprint would be developed under Alternative 5, and ground-disturbing construction activities would be generally the same (although with a reduced intensity) under Alternative 5, the potential impact to previously undiscovered cultural, paleontological, or Tribal cultural resources during construction would remain similar to the Project. Like the Project, Mitigation Measures **MM-CUL-1** through **MM-CUL-9** and **MM-GEO-1** would be required to reduce potential impacts to less than significant levels. Therefore,

implementation of Alternative 5 would result in similar impacts to cultural, paleontological, and Tribal cultural resources when compared to the Project.

Greenhouse Gas Emissions

Alternative 5 would reduce potential GHG emissions associated with reduced residential units and a lower project resident population, including from transportation emissions, when compared to the current Project. Like the Project, Alternative 5 would be anticipated to implement project design features and mitigation measures to demonstrate consistency with the City's CAP and 2022 CARB Scoping Plan Update, Additionally, Alternative 5 would not conflict with the SCAG 2020–2045 RTP/SCS. Therefore, Alternative 5 would result in slightly reduced GHG emissions as compared to the Project and result in similar less-than-significant impacts related to GHG emissions as the Project.

Hazards and Hazardous Materials

Alternative 5 would result in similar impacts to hazards and hazardous materials as compared to the current Project. Because Alternative 5 would result in development within the same Project footprint and involve similar ground-disturbing construction activities, as well as the construction, filling, and maintenance of the proposed lake system, Alternative 5 would result in potential impacts related to the accidental release of hazardous materials from onsite impacted soils and soil vapor, buried landfill, or from the extraction of potentially contaminated groundwater and use as surface water for the lake system. Like the Project, mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HAZ-1** through **MM-HAZ-4**). Therefore, the impacts from implementation of Alternative 5 would be similar to impacts related to hazards and hazardous materials from the Project and be less than significant with mitigation incorporated.

Hydrology and Water Quality

Alternative 5 would result in similar impacts to hydrology and water quality when compared to the current Project. Alternative 5 would include the construction, filling, and maintenance of the proposed lake system with the use of the onsite groundwater wells, similar to the Project. Thus, Alternative 5 would result in potential impacts related to degradation of ground or surface water quality, and demand on groundwater supplies, similar to the Project. As with the Project, mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HYD-1, MM-HYD-2, MM-HAZ-3** and **MM-HAZ-4**). Therefore, the impacts from implementation of Alternative 5 to hydrology and water quality would be the same as impacts resulting from the Project, and would be less than significant with mitigation incorporated.

Noise

Alternative 5 would develop fewer residential units when compared to the current Project. As such, construction-related noise impacts to sensitive receptors could be anticipated to be reduced slightly compared to the proposed Project, due to a reduced intensity of construction. However, construction would be anticipated to include the same type of equipment and occur over the same phasing. As such, a potential impact to sensitive receptors as a result of construction noise could occur, and, like with the Project, implementation of Mitigation Measures **MM-NOI** and **MM-NOI-2** would be required to reduce potential impacts to a less-than-significant level. Additionally, due to the reduced residential population under Alternative 5, project-generated traffic noise impacts would be anticipated to be reduced when compared to the Project. However, potential traffic noise-related impacts to ambient noise levels may still occur, so Mitigation Measure **MM-NOI-3** would be required. Therefore, Alternative 5 would reduce

operational noise compared to the Project and result in similar less-than-significant impacts with mitigation incorporated.

Feasibility

Alternative 5 could be feasibly developed. However, this alternative achieves the Project Objectives to a lesser degree than Alternative 4 and the current Project.

Project Objectives

Alternative 5 would meet Project Objectives 1, 3, 4, 5, 6, and 7, but to a lesser extent when compared to the Project, by providing residential units, schools, public services, commercial, and recreational uses, and creating a vibrant Downtown Center connected to Project features and regional job centers through internal circulation and connectivity. This alternative would partially meet Objectives 2 and 8, because the alternative would allow for development of up to 7,500 residential units, providing workforce housing for local and regional jobs; however, Alternative 5 would not contribute as many residential units towards the City's existing and projected housing goals. Further, the alternative would contribute considerably fewer residential units toward the goal set forth in Objective 2, namely, to achieve a better balance of jobs-to-housing, and facilitate housing and job growth in central Moreno Valley.

7.4.6 Alternative 6: Increased Commercial

Alternative 6 would develop the Project with additional commercial development up to 150,000 square feet of commercial/retail space. (See Sierra Club letter during the public scoping period.) The comment from Sierra Club suggested that the Project should have more commercial options available within walking distance for the residents of the Project to reduce vehicle trips. The Project would remain the same in all other respects. Thus, this alternative would develop 15,000 residential multi-family units, 40-acre lake complex, 40 acres of parks, open space, and recreation, and approximately 40 acres of schools. The organization and density of land uses for Alternative 6 would differ compared to the Project in order to accommodate 150,000 square feet of commercial land uses within the 668.8-acre undeveloped portion of the Project site.

Air Quality

Implementation of Alternative 6 would increase commercial uses to 150,000 square feet compared to the 49,900 square feet proposed as part of the Project. Under Alternative 6, an increase in commercial square footage would increase the sources and amount of emissions resulting from the construction of commercial buildings. Like the Project, incorporation of Mitigation Measures **MM-AQ-1** through **MM-AQ-11** would be anticipated to reduce construction-generated criteria air pollutant emissions below the SCAQMD and would reduce TAC health risk impacts to less than significant. As such, construction related criteria pollutant emissions would likely be similar to the Project with mitigation incorporated.

The increased square footage of commercial uses would increase the operational emissions of criteria pollutants VOC NOx, CO, PM10, and PM2.5 as compared to the Project, because the increased commercial uses would be anticipated to draw or induce increased vehicle miles traveled (VMT) from visitors and employees of the additional commercial buildings. This increase in VMT and associated GHG emissions is inconsistent with the State climate goals. Vehicle miles traveled is also directly related to the emissions of criteria pollutants VOC NOx, CO, PM10, and PM2.5. Thus, this alternative would result in emissions of criteria air pollutants above the operational thresholds

established by the SCAQMD. Even with the incorporation of mitigation measures, the potential significant impact related to operational criteria pollutant emissions would remain significant and unavoidable. Thus, Alternative 6 would result in greater impacts related to operational criteria pollutant emissions when compared to the Project; like the Project, however, air quality impacts would be significant and unavoidable.

Biological Resources

Alternative 6 would result in similar impacts to biological resources when compared to the current Project. Because the same Project footprint would be developed under Alternative 6, and construction activities would be generally the same under Alternative 6, the potential impact to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code during construction would remain. Mitigation Measures **MM-BIO-1** through **MM-BIO-4** would similarly be required to ensure compliance with the MSHCP and the Moreno Valley Municipal Code concerning tree replacement Therefore, implementation of Alternative 6 would result in similar impacts to biological resources when compared to the Project.

Cultural, Paleontological, and Tribal Cultural Resources

Alternative 6 would result in similar impacts to cultural, paleontological, and Tribal cultural resources when compared to the current Project. Because the same Project footprint would be developed under Alternative 6, and ground-disturbing construction activities would be generally the same under Alternative 6, the potential impact to previously undiscovered cultural, paleontological, or Tribal cultural resources during construction would be similar to the Project. Mitigation measures **MM-CUL-1** through **MM-CUL-9** and **MM-GEO-1** would be required to reduce potential impacts to less-than-significant levels. Therefore, implementation of Alternative 6 would result in similar impacts to cultural, paleontological, and Tribal cultural resources when compared to the Project, which would be less-than-significant with mitigation incorporated.

Greenhouse Gas Emissions

Alternative 6's increased commercial development would result in increased sources of GHG emissions related to these uses, including induced vehicle miles traveled from visitors and employees traveling to the Project site, as discussed in the air quality analysis for Alternative 6 above. This increase is inconsistent with State housing and climate goals. Like the Project, Alternative 6 would be anticipated to implement project design features and mitigation measures to demonstrate consistency with the City's CAP and 2022 CARB Scoping Plan Update, Additionally, Alternative 6 would not conflict with the SCAG 2020–2045 RTP/SCS. Therefore, Alternative 6 would result in greater GHG emissions as compared to the Project, but would likely result in similar less-than-significant impacts related to GHG emissions as the Project with mitigation incorporated.

Hazards and Hazardous Materials

Alternative 6 would result in similar impacts to hazards and hazardous materials as the current Project. Because Alternative 6 would develop within the same Project footprint, and would involve similar ground-disturbing construction activities, as well as the construction, filling, and maintenance of the proposed lake system, Alternative 6 would result in potential impacts related to the accidental release of hazardous materials from onsite impacted soils and soil vapor, buried landfill, or from the extraction of potentially contaminated groundwater and use as surface water for the lake system. As with the Project, mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HAZ-1** through **MM-HAZ-4**). Therefore, the impacts from

implementation of Alternative 6 would be similar to impacts related to hazards and hazardous materials from the Project and be less-than-significant with mitigation incorporated.

Hydrology and Water Quality

Alternative 6 would result in similar impacts to hydrology and water quality as the current Project. Alternative 6 would include the construction, filling, and maintenance of the proposed lake system with the use of the onsite groundwater wells, similar to the proposed Project. Thus, Alternative 6 would result in potential impacts related to degradation of ground or surface water quality, and demand on groundwater supplies, similar to the Project. Mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HYD-1, MM-HYD-2, MM-HAZ-3** and **MM-HAZ-4**). Therefore, the impacts from implementation of Alternative 6 to hydrology and water quality would be similar to the impacts resulting from the Project and be less-than-significant with mitigation incorporated.

Noise

Alternative 6's increase in commercial uses when compared to the current Project would slightly increase construction-related noise impacts to sensitive receptors compared to the proposed Project, because construction would occur within the same development footprint but may be of increased construction intensity or duration due to the additional commercial buildings. Construction would be anticipated to include the same type of equipment and involve similar construction phasing. As such, a potential impact to sensitive receptors as a result of construction noise could occur, and, similar to the Project, implementation of **MM-NOI** and **MM-NOI-2** would be required to reduce potential impacts to a less-than-significant level. Further, an increase in commercial uses would result in an increase of traffic noise from visitors and employees compared to the Project. Potential traffic noise-related impacts to ambient noise levels would require implementation of **MM-NOI-3** to reduce impacts to less than significant levels. Therefore, Alternative 6 would slightly increase construction- and traffic-related impacts to ambient noise and impacts to sensitive receptors; however, because mitigation would still be anticipated to reduce these impacts to less than significant, Alternative 6 would result in similar impacts when compared to the Project.

Feasibility

Alternative 6 could be feasibly developed. However, this alternative would potentially increase traffic related impacts.

Project Objectives

Alternative 6 would meet Project Objectives 1, 3, 4, 6, 7 and 8, similar to the current Project by providing residential units, schools, public services, commercial, and recreational uses, and creating a vibrant Downtown Center connected to Project features and regional job centers through internal circulation and connectivity. This alternative would meet Objective 2, but to a lesser extent compared to the Project. This alternative would also meet Objective 5, but to a lesser extent compared to the Project, because the scope of commercial development may induce additional and further trips from outside the area in a manner that may increase VMT and associated GHG emissions.

7.4.7 Alternative 7: Increased Density - 20,000 Units

This alternative would allow for the development of up to 20,000 workforce residential units. Alternative 7 would also include the development of 49,900 square feet of commercial, approximately 80 acres of recreational facilities including a 40-acre lake complex, a 40-acre lake promenade, approximately 40 acres of schools, and 25 acres of commercial, like the current Project.

Air Quality

Implementation of Alternative 7 would increase residential development to 20,000 residential units, which would result in increased emissions of criterial pollutants VOC and NOx in exceedance of the criteria air pollutant construction thresholds established by SCAQMD, as well as emissions of PM10 and PM2.5, in exceedance of the applicable SCAQMD localized significance thresholds, resulting in potential exposure to sensitive receptors during construction. Under Alternative 7, an increase in residential development would increase sources and amount of emissions resulting from the construction of an additional 5,000 residential units. However, like the Project, incorporation of Mitigation Measures **MM-AQ-1** through **MM-AQ-11** would be anticipated to reduce construction-generated criteria air pollutant emissions below the SCAQMD threshold and reduce TAC health risk impacts to less-than-significant impact levels. As such, Alternative 7 would result in greater construction-related air pollutant emissions; though such impacts would be less-than-significant with mitigation, similar to the Project.

The increase in residential units and population with Alternative 7 would increase the operational emissions of criteria pollutants VOC NOx, CO, PM10, and PM2.5 as compared to the Project, because additional residents onsite would induce increased vehicle miles traveled, and the vehicle miles traveled number associated with a project is directly related to the emissions of criteria pollutants VOC NOx, CO, PM10, and PM2.5. Thus, this alternative would result in emissions of criteria air pollutants above the operational thresholds established by the SCAQMD, like the Project. Even with the incorporation of mitigation measures, the potential significant impact related to operational criteria pollutant emissions would remain significant and unavoidable. Thus, Alternative 7 would result in greater emissions of criteria pollutants and result in significant and unavoidable impacts related to operational criteria pollutant emissions, like the Project.

Biological Resources

Alternative 7 would result in similar impacts to biological resources when compared to the current Project. Because the same Project footprint would be developed under Alternative 7, and construction activities would be generally the same under Alternative 7, the potential impact to trees regulated by Section 9.17.03 of the City of Moreno Valley Municipal Code during construction would remain. Mitigation Measures **MM-BIO-1** through **MM-BIO-4** would similarly be required to ensure compliance with the MSHCP and the Moreno Valley Municipal Code concerning tree replacement. Therefore, implementation of Alternative 7 would result in similar impacts to biological resources when compared to the Project.

Cultural, Paleontological, and Tribal Cultural Resources

Alternative 7 would result in similar impacts to cultural, paleontological, and Tribal cultural resources when compared to the current Project. Because the same Project footprint would be developed under Alternative 7, and ground-disturbing construction activities would be generally the same under Alternative 7, the potential impact to previously undiscovered cultural, paleontological, or Tribal cultural resources during construction would be similar to the Project. Mitigation measures **MM-CUL-1** through **MM-CUL-9** and **MM-GEO-1** would be required to reduce

potential impacts to less-than-significant levels. Therefore, implementation of Alternative 7 would result in similar impacts to cultural, paleontological, and Tribal cultural resources when compared to the Project: less than significant with mitigation incorporated.

Greenhouse Gas Emissions

Alternative 7's 20,000 residential units would result in an increase of sources of GHG emissions related to the increase in residential development, including vehicle miles traveled from residents of the Project site. Like the Project, Alternative 7 would be anticipated to implement project design features and mitigation measures to demonstrate consistency with the City's CAP and 2022 CARB Scoping Plan Update. Alternative 7 would exceed SCAG's population projections for the City through 2040, but would not exceed the City's anticipated housing need. Project design features and mitigation measures would be anticipated to implement reductions strategies consistent with RTP/SCS goals and policies to reduce mobile source emissions.. Therefore, Alternative 7 would result in increased GHG emissions as compared to the Project, but would likely result in similar less-than-significant impacts related to GHG emissions as the Project with mitigation incorporated.

Hazards and Hazardous Materials

Alternative 7 would result in similar impacts to hazards and hazardous materials when compared to the current Project. Because Alternative 7 would result in development within the same Project footprint and involve similar ground-disturbing construction activities, as well as the construction, filling, and maintenance of the proposed lake system, Alternative 7 would result in potential impacts related to the accidental release of hazardous materials from onsite impacted soils and soil vapor, buried landfill, or from the extraction of potentially contaminated groundwater and use as surface water for the lake system. Mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HAZ-1** through **MM-HAZ-4**). Therefore, the impacts from implementation of Alternative 7 would be similar to impacts related to hazards and hazardous materials from the Project and be less-than-significant with mitigation incorporated.

Hydrology and Water Quality

Alternative 7 would result in similar impacts to hydrology and water quality as the current Project. Alternative 7 would include the construction, filling, and maintenance of the proposed lake system with the use of the onsite groundwater wells, similar to the Project. Thus, Alternative 7 would result in potential impacts related to degradation of ground or surface water quality, and demand on groundwater supplies, similar to the Project. Mitigation would be required to reduce potential impacts to the environment for accidental release (**MM-HYD-1, MM-HYD-2, MM-HAZ-3** and **MM-HAZ-4**). Therefore, the impacts from implementation of Alternative 7 to hydrology and water quality would be similar to impacts resulting from the Project and be less-than-significant with mitigation incorporated.

Noise

Alternative 7 would result in an increase in residential units to 20,000, and house 57,400 total residents on the Project site. As such, construction-related noise impacts to sensitive receptors could be anticipated to be slightly increased when compared to the current Project, because construction would occur within the same Project footprint but at an increased level of construction intensity or duration due to the additional residential units. Construction would be anticipated to include the same type of equipment and involve similar construction phasing. As such, a potential impact to sensitive receptors as a result of construction noise could occur, and, like the Project, implementation of Mitigation Measures **MM-NOI** and **MM-NOI-2** would be required to reduce potential impacts to a

less-than-significant levels. Further, an increase in residential units would result in an increase of traffic noise from the increased residents. Potential traffic noise-related impacts to ambient noise levels would require implementation of Mitigation Measures **MM-NOI-3** to reduce impacts to less-than-significant levels. Therefore, Alternative 7 would result in increased construction- and traffic-related impacts to ambient noise and impacts to sensitive receptors; however, because mitigation would still be anticipated to reduce these impacts to less than significant, Alternative 7 would result in similar impacts when compared to the Project.

Feasibility

Alternative 7 could be feasibly developed; however, from a design standpoint, this alternative, if approved, would increase residential development by an additional 5,000 units when compared to the Project. This increase in residential development would make the design more compact from a planning standpoint.

Project Objectives

Alternative 7 would meet all the Project Objectives by providing workforce housing, 49,900 square feet of commercial uses, a 40-acre lake complex, approximately 40 acres of parks, open space, and recreation, and approximately 40 acres of schools, and create a vibrant Downtown Center connected to Project features and regional job centers through internal circulation and connectivity. As to environmental impacts, Alternative 7 would result in greater air quality impacts.

7.5 Comparison of Alternatives

Table 7-1. Comparison of the Environmental Impacts of Alternatives

Environmental Topic	Project	Alternative 1[1]	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6	Alternative 7
Air Quality	Significant and Unavoidable (Project and Cumulative)	Reduced	Slightly reduced (Still Significant and unavoidable)	Similar	Reduced (Still Significant and Unavoidable)	Slightly reduced (Still Significant and unavoidable)	Greater	Greater
Biological Resources	Less Than Significant with Mitigation	Reduced	Similar	Similar	Similar	Similar	Similar	Similar
Cultural, Paleontological, and Tribal Cultural Resources	Less Than Significant with Mitigation	Reduced	Reduced	Similar	Similar	Similar	Similar	Similar
Greenhouse Gas Emissions	Less Than Significant with Mitigation	Reduced	Reduced	Similar	Slightly Reduced	Slightly Reduced	Similar	Similar
Hazards and Hazardous Materials	Less Than Significant with Mitigation	Reduced	Similar	Slightly reduced	Similar	Similar	Similar	Similar
Hydrology and Water Quality	Less Than Significant with Mitigation	Reduced	Similar	Reduced	Similar	Similar	Similar	Similar
Noise	Less Than Significant with Mitigation	Reduced	Similar	Similar	Reduced	Reduced	Similar	Similar

1: Alternative 1: No Development; Alternative 2: Previously Approved Aquabella 2005 Specific Plan Amendment; Alternative 3: 2040 General Plan Downtown Center (2,702 Units/1,804,00sf); Alternative 4: Reduced Density (10,000 Units); Alternative 5: Reduced Density (7,500 Units); Alternative 6: Increased Commercial; Alternative 7: Increase Density (20,000 Units).

7.6 Environmentally Superior Alternative

Section 15126.6 of the CEQA Guidelines states that an EIR must identify the "environmentally superior" alternative. "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

To reiterate, based upon the discussion in Section 7.1.3 (Significant and Unavoidable Project Impacts), the Project would result in significant and unavoidable impacts to air quality related to conflict with the SCAQMD 2022 AQMP, and due to exceedance of criteria air pollutant operational thresholds established by the SCAQMD for volatile organic compounds, would result in emissions of criterial pollutants in exceedance of the criteria air pollutant construction thresholds established by SCAQMD, emissions in exceedance of the applicable SCAQMD localized significance thresholds, resulting in potential exposure to sensitive receptors during construction, and would also result in a potential impact related to construction TAC health risk impacts. Therefore, a determination of an environmentally superior alternative will consider the potentially unavoidable air quality impacts.

Based on the above analysis and the summary of impacts presented in Table 7.1, the environmentally superior alternative would be Alternative 1: No Project - No Development, because this alternative would consist of no physical development of the Project site and reduce the level of impacts for all environmental impacts that are either less than significant with mitigation or significant and unavoidable with implementation of the Project. However, Alternative 1 is a CEQA "No Project" alternative, and therefore, cannot be considered the environmentally superior alternative. Alternative 2 would also reduce impacts compared to the Project but, as a "No Project" alternative, cannot be considered the environmentally superior alternative.

Of the remaining alternatives, Alternative 5: Reduced Density (7,500 Units) reduces Project impacts to the greatest extent, as shown in Table 7.1. Alternative 5 would slightly reduce (still significant and unavoidable) impacts related to air quality, would slightly reduce impacts to greenhouse gas emissions, and would reduce impacts related to noise. At a reduced 7,500 units and without increased commercial space compared to the Project, Alternative 5 would result in the greatest reductions to transportation- and land use- related air quality emissions, GHG emissions, and noise impacts compared to the other alternatives. Therefore, the environmentally superior alternative is Alternative 5: Reduced Density 7,500 Units.

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8 SEIR References, Consultation, and Preparation

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