

# **Chapter 4** California Environmental Quality Act (CEQA) Evaluation

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Chapter 1 of this Environmental Impact Report/Environmental Impact Statement (EIR/EIS) discusses the purpose and need for the Mid County Parkway (MCP) project. Section 15124(b) of the California Environmental Quality Act (CEQA) Guidelines requires that the CEQA Lead Agency provide a statement of objectives sought by the proposed project. For the MCP project, the project objectives are as follows:

1. Provide a transportation parkway that would effectively and efficiently accommodate regional west-east movement of people and goods between and through Corona, Perris, and San Jacinto.
2. Provide increased capacity to support the forecast travel demand for the 2035 design year;
3. Provide a limited access parkway;
4. Provide roadway geometrics to meet State highway design standards;
5. Accommodate Surface Transportation Assistance Act (STAA) National Network trucks<sup>1</sup>; and
6. Provide a parkway that is compatible with a future multimodal transportation system.

## **4.1 Determining Significance Under CEQA**

The MCP project is subject to federal as well as Riverside County Transportation Commission (RCTC) and state environmental review requirements because the RCTC proposes the use of federal funds and/or the project requires a federal approval action. Project documentation, therefore, has been prepared in compliance with both CEQA and the National Environmental Policy Act (NEPA). The RCTC is the project proponent and the lead agency under CEQA. Because federal transportation funds may be used for the project, the Federal Highway Administration (FHWA) is the lead agency under NEPA, with the California Department of Transportation (Caltrans) acting as its agent and providing oversight for the NEPA process.

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<sup>1</sup> These are larger trucks that are permitted on the federal Interstate system and the non-Interstate Federal-aid Primary System.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS), or some lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to “significantly affect the quality of the human environment.” The NEPA determination of significance is based on context and intensity; CEQA is based on a similar concept—the environmental setting. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the CEQA lead agency (RCTC for the MCP project) to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and summarizes CEQA significance based on the full analysis provided in Chapter 3.

## **4.2 Discussion of Significance of Impacts**

The significance of the potential impacts of the Locally Preferred Alternative (Alternative 9 Temescal Wash Area Design Variation [TWS DV]) and the other MCP Build Alternatives under CEQA was assessed based on the Initial Study (IS) Checklist provided in Appendix A and the analyses of project impacts as discussed in detail in Chapter 3, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures. The impacts of the MCP Build Alternatives are summarized in the following sections, based on the level of significance of the project effects under CEQA. For purposes of CEQA review, Alternative 9 TWS DV is considered the project, and Alternatives 4 through 7 are alternatives to the project.

## **4.2.1 No Impact**

### **4.2.1.1 Air Quality (CEQA Checklist Question III.a)**

As discussed in Section 3.14 (Air Quality), Alternative 9 TWS DV and the other MCP Build Alternatives would not conflict with or obstruct implementation of any applicable air quality plan.

### **4.2.1.2 Geology and Soils (CEQA Checklist Question VI.e)**

Alternative 9 TWS DV and the other MCP Build Alternatives will not include septic tanks or alternative waste treatment systems. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in impacts related to waste disposal or treatment facilities.

### **4.2.1.3 Hazards and Hazardous Materials (CEQA Checklist Questions VII.e and VII.f)**

The MCP study area is approximately 3.2 kilometers (km) (2.0 miles [mi]) north of Perris Valley Airport, 9.3 km (5.8 mi) south of Riverside Municipal Airport, 7.4 km (4.6 mi) southeast of the City of Corona Municipal Airport, and 0.3 km (0.2 mi) south of the March Joint Powers Authority Airport at the March Air Reserve Base.

Alternative 9 TWS DV and the other MCP Build Alternatives would not be subject to any greater hazard or risk associated with operations at those airports than other land uses in the vicinity of public or private airports and airfields.

### **4.2.1.4 Hydrology and Water Quality (CEQA Checklist Question VIII.g)**

Alternative 9 TWS DV and the other MCP Build Alternatives would not result in the placement of any housing in a 100-year flood hazard area and would not result in adverse impacts related to the placement of housing in a 100-year flood hazard area.

### **4.2.1.5 Mineral Resources (CEQA Checklist Questions X.a and X.b)**

According to the California State Geological Survey,<sup>1</sup> Alternative 9 TWS DV and the other MCP Build Alternatives are not within a State-designated principal mineral-producing locality, and there are no significant mineral deposits in the area. The City of Corona has land use designations in their General Plan for areas that are not state-designated zones but have been determined by the City of Corona to be a preserved mineral resource. However, active mines within the City of Corona are mostly east of Interstate 15 (I-15) and State Route 91 (SR-91) and therefore would

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<sup>1</sup> Web site: [http://www.consrv.ca.gov/CGS/geologic\\_resources/mineral\\_production/YellowMap.pdf](http://www.consrv.ca.gov/CGS/geologic_resources/mineral_production/YellowMap.pdf) (accessed September 12, 2007).

not be impacted by the MCP project. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not 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 or 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.

#### **4.2.1.6 Noise (CEQA Checklist Questions XI.b, XI.e, and XI.f)**

Highways typically are not major sources of ground-borne noise or vibration. Alternative 9 TWS DV and the other MCP Build Alternatives are not expected to expose persons to or generate excessive ground-borne noise levels or vibration.

The MCP study area is approximately 3.2 km (2.0 mi) north of Perris Valley Airport, 9.3 km (5.8 mi) south of Riverside Municipal Airport, 7.4 km (4.6 mi) southeast of the City of Corona Municipal Airport, and 0.3 km (0.2 mi) south of the March Joint Powers Authority Airport at the March Air Reserve Base. Alternative 9 TWS DV and the other MCP Build Alternatives are not noise-sensitive land uses and would not expose people to any greater aviation noise effects from these public/private airports than those already experienced in the MCP study area.

#### **4.2.1.7 Transportation/Traffic (CEQA Checklist Questions XV.c and XV.d)**

The MCP study area is approximately 3.2 km (2.0 mi) north of Perris Valley Airport, 9.3 km (5.8 mi) south of Riverside Municipal Airport, 7.4 km (4.6 mi) southeast of the City of Corona Municipal Airport, and 0.3 km (0.2 mi) south of the March Joint Powers Authority Airport at the March Air Reserve Base. Alternative 9 TWS DV and the other MCP Build Alternatives do not include any features that would be of sufficient height to affect area airspace. As a result, Alternative 9 TWS DV and the other MCP Build Alternatives would not affect air traffic patterns.

Alternative 9 TWS DV and the other MCP Build Alternatives would be designed and constructed in compliance with Caltrans Standard Construction Specifications and other applicable professional, design, and construction standards. Alternative 9 TWS DV and the other MCP Build Alternatives do not propose any hazardous design features or incompatible uses. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse impacts related to design hazards.

#### **4.2.1.8 Utilities and Service Systems (CEQA Checklist Question XVI.g)**

Construction waste from the MCP project will be limited to debris such as materials from demolished structures within the project right of way. Concrete, rebar, and

vegetation and would be disposed of in accordance with federal, state, and local regulations related to recycling. Therefore, the MCP project would not result in impacts related to federal, state, and local statutes and regulations related to solid waste.

## **4.2.2 Less than Significant Effects of the Proposed Project**

### **4.2.2.1 Agricultural Resources (CEQA Checklist Question II.c)**

As discussed in Section 3.2 (Farmlands/Timberlands), Alternative 9 TWS DV and the other MCP Build Alternatives would traverse areas currently devoted to a variety of agricultural uses, including grazing, dryland and irrigated farming, orchards, and dairies. However, the project is not expected to result in additional conversion of designated farmlands to nonagricultural uses. Therefore, the MCP Build Alternatives would not have a significant adverse impact on agricultural lands. This determination is supported by the conclusions derived from the NRCS-CPA-106 forms (provided in the *Community Impact Assessment* [LSA Associates, Inc., 2008]) in which the final scoring for each alternative and associated design variations on Form NRCS-CPA-106 ranged from 138 to 139 (maximum score 180), indicating no further analyses are required for farmland issues under the Farmland Protection Policy Act.

In addition, the Riverside County Right-to-Farm Ordinance seeks to reduce the loss of Riverside County's agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. The Cities of Corona, Perris, and San Jacinto General Plans also have goals to promote preservation of farmland; however, these plans acknowledge that agricultural lands may eventually be converted for residential and/or commercial uses.

Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse changes in the existing environment which, due to their location or nature, could result in the conversion of designated Farmlands to nonagricultural uses. Therefore, impacts to the existing environment are less than significant, and no mitigation is required.

### **4.2.2.2 Air Quality (CEQA Checklist Questions III.b, III.c, and III.d)**

As discussed in detail in Section 3.14 (Air Quality), the MCP project area is in a nonattainment area for the national ambient air quality standards (NAAQS) for particulate matter (PM) 2.5 and 10 microns or less in diameter (PM<sub>2.5</sub> and PM<sub>10</sub>, respectively) and carbon monoxide (CO). As discussed in Section 3.14, Alternative 9 TWS DV and the other MCP Build Alternatives would improve traffic movement in

the project vicinity, thereby lowering the total pollutants emitted by motor vehicles. Localized emissions of CO may increase as a result of Alternative 9 TWS DV and the other MCP Build Alternatives. However, Alternative 9 TWS DV and the other MCP Build Alternatives are not expected to result in concentrations exceeding the 1- and 8-hour CO standards. Alternative 9 TWS DV and the other MCP Build Alternatives would not contribute to a PM hot spot that would cause or contribute to a violation of the federal PM<sub>10</sub> or PM<sub>2.5</sub> standards.

While Alternative 9 TWS DV and the other MCP Build Alternatives would result in a small increase in localized Mobile Source Air Toxic (MSAT) emissions, the United States Environmental Protection Agency (EPA) vehicle and fuel regulations, coupled with fleet turnover, would result in substantial reductions in MSATs over time that would result in future regionwide MSAT levels substantially lower than today's levels.

### ***Health Risk Assessment – Diesel Toxics Analysis***

The following health risk assessment (HRA) evaluates two issues: (1) the general health risks of air toxics and the current contribution of diesel trucks to those risks; and (2) the MCP project's potential air toxics impact.

Determining how hazardous a substance is depends on many factors, including the amount of the substance in the air, how it enters the body, how long the exposure lasts, and what organs in the body are affected. One major way these substances enter the body is through inhalation of gas or particulate substances. While many gases are harmful, very small particles penetrate deeply into the lungs, contributing to a range of health problems. Exhaust from diesel engines is a major source of these airborne particles. California's Office of Environmental Health Hazard Assessment (OEHHA) has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any toxic air contaminant it has evaluated. Improvements to diesel fuel and diesel engines have already reduced emissions of some of the contaminants, which, when fully implemented, will result in a 75 percent reduction in particle emissions from diesel-powered trucks and other equipment by 2010 (compared to 2000 levels) and an 85 percent reduction by 2020.

There are currently no federal project-level requirements for air toxics analysis, and CEQA only requires consideration of the risks from toxics, with SCAQMD providing the *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis* (March 2003) for

guidance. SCAQMD has established a maximum individual cancer risk significance threshold of 10 in 1 million ( $1.0 \times 10^{-5}$ ) (which assumes a project, such as the MCP project, will be constructed with best available control technology for toxics [T-BACT]) and a noncarcinogenic hazard index of 1.0.

According to the California Air Resources Board (ARB),<sup>1</sup> when conducting an HRA, the surrogate for whole diesel exhaust is diesel PM, which is used as the basis for the potential risk calculations. When conducting an HRA, the potential cancer risk from inhalation exposure to diesel PM will outweigh the potential noncancer health impacts. Therefore, inhalation cancer risk is required for every HRA. When comparing whole diesel exhaust to speciated diesel exhaust (e.g., polycyclic aromatic hydrocarbons [PAHs], metals), potential cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multipathway cancer risk from the speciated components. For this reason, there will be few situations where an analysis of multipathway risk is necessary.<sup>2</sup> To estimate the potential cancer risk associated with project-related diesel engine exhaust, a dispersion model is used to translate an emission rate from a source location to a concentration at a receptor location of interest. Dispersion modeling varies from the simpler, more conservative screening-level analysis to the more complex and refined detailed analysis. This calculation was performed using the EPA-approved SCREEN3 computer model. This model provides conservative estimates of concentrations considering site and source geometry, source strength, distance to receptor, and building wake effects on plume distribution. The SCREEN3 model was developed to provide an easy-to-use method of obtaining pollutant concentration estimates where upper-bound estimates are required or where meteorological data is unavailable. It is a useful tool in proving that an impact is not significant (i.e., if a screening-level analysis demonstrates an impact is not significant, its conservative nature provides confidence in this conclusion). Screening-level modeling is less useful in concluding that an impact is significant. When a screening-level analysis indicates a significant impact, this conclusion

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<sup>1</sup> HARP Model Documentation, Appendix K, *Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines*, ARB, <http://www.arb.ca.gov/toxics/harp/docs/userguide/appendixK.pdf>, accessed February 2005.

<sup>2</sup> OEHHA, *Air Toxics Hot Spots Program Risk Assessment Guidelines*, August 2003, Appendix D, *Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Vehicles*, Section B.

normally points to the need for a more sophisticated (and less conservative) method of analysis using a model such as ISCST.

This screening-level analysis was conducted as recommended in the OEHHA Guidelines and by the ARB (HARP Model Documentation, Appendix K, Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Engines, ARB, February 2005). It consists of the following steps:

- 1) Determining the PM<sub>10</sub> emission factor
- 2) Determining the PM<sub>10</sub> emission rate
- 3) Determining the PM<sub>10</sub> concentration at location(s) of interest
- 4) Translating the PM<sub>10</sub> concentration(s) to health risk values
- 5) Comparing the health risk values to thresholds and determining significance

The PM<sub>10</sub> emission factor was determined by using the ARB model, EMFAC2007, to generate emission factors for diesel trucks traveling down the roadway. The PM<sub>10</sub> emission rate was determined by using projected total average daily traffic (ADT) volumes for the project and fleet percentages of 5 percent for medium and heavy trucks<sup>1</sup> and an average speed of 50 miles per hour (mph). Additionally, it was assumed that 75 percent of medium trucks and 90 percent of heavy trucks are diesel-powered<sup>2</sup>. This analysis assumed that this emission rate is constant for 70 years.

Since this screening analysis is looking at a simple linear health effect perpendicular to the roadway, all diesel truck exhaust was modeled as if it came from a single area, representing the approximate cross-section of the finished roadway, 50 meters (m) by 20 m (165 feet [ft] by 65 ft). The SCREEN3 input parameters are shown in Table 4.2.A. Stack height (the height of the end of exhaust stacks on trucks) was based on observations of many trucks and approximating typical dimensions.

The PM<sub>10</sub> concentrations are translated to the health risk values using the OEHHA methodology as described in the following equations:

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<sup>1</sup> *Traffic Technical Report* (VRPA Technologies, Inc., 2008).

<sup>2</sup> URBEMIS2007

**Table 4.2.A SCREEN3 Input Parameters**

Simple Terrain Inputs	
Source Type	Point
Emission Rate (G/S-M**2)	1.0
Stack Height (M)	2.0
Length of Larger Side (M)	50
Length of Smaller Side (M/S)	20
Receptor Height (M)	0
Urban/Rural Option	Urban

Source: LSA Associates, Inc., 2007.

$$\text{Inhalation cancer risk} = (\text{Cair} * \text{DBR} * \text{A} * \text{EF} * \text{ED} * 1 \times 10^{-6}) / \text{AT} * \text{Inhalation Cancer Potency Factor}$$

Where:

Cair	Concentration of PM <sub>10</sub> in air		
DBR	303	Daily breathing rate	(L/kg-day)
A	1	Inhalation absorption factor	
EF	350	Exposure frequency	(days/yr)
ED	70	Exposure duration	(years)
AT	25,550	Avg. time period of exposure	(days)
Diesel PM <sub>10</sub>	1.1	Inhalation Cancer Potency factor	(mg/kg-d) <sup>-1</sup>

Source: OEHHA Guidelines, August 2003.

and:

$$\text{Inhalation chronic risk} = \text{Cair} / \text{Inhalation Chronic REL}$$

Where: Inhalation Chronic REL = 5.0

### **Model Results**

The inhalation cancer risk and inhalation chronic risk were calculated using the peak ADT volumes for each of the MCP Alternatives. The results of the modeling are shown in Table 4.2.B. As shown, the cancer risk threshold of 10 in 1 million and the chronic risk threshold of 1 would not be exceeded by any of the MCP Alternatives. Therefore, the proposed project would not result in any significant health risks to persons near the project, and no mitigation measures would be required.

In summary, Alternative 9 TWS DV and the other MCP Build Alternatives would not violate any air quality standard; would not contribute substantially to an existing or projected air quality violation for CO, PM<sub>2.5</sub>, or PM<sub>10</sub>; would not result in an adverse impact related to MSATs or air toxics; and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, no mitigation is required.

**Table 4.2.B Results of Health Risk Assessment Modeling**

Alternative	Peak Volume ADT	Distance from Roadway Centerline (m)	Scaled PM <sub>10</sub> Concentrations		Inhalation Cancer Risk # in 1 Million	Inhalation Chronic Risk Factor
			1-hour (µg/m <sup>3</sup> )	Annual (µg/m <sup>3</sup> )		
No Build	62,900	20	0.0105	0.00084	0.19	0.00017
Alternative 4	104,000	20	0.0279	0.00224	0.51	0.00045
Alternative 5	102,000	20	0.0274	0.00219	0.50	0.00044
Alternative 6	100,400	20	0.0270	0.00216	0.49	0.00043
Alternative 7	99,400	20	0.0267	0.00214	0.49	0.00043
Alternative 9	86,600	20	0.0233	0.00186	0.43	0.00037

Source: LSA Associates, Inc., November 2007.

ADT = average daily traffic

m = meters

PM<sub>10</sub> = particulate matter with a diameter of 10 microns or less

µg/m<sup>3</sup> = micrograms per cubic meter

**4.2.2.3 Biological Resources (CEQA Checklist Questions IV.d and IV.e)**

Wildlife crossings are included in the design of Alternative 9 TWS DV and the other MCP Build Alternatives. Wildlife crossings would be placed at key locations in the Multiple Species Habitat Conservation Plan (MSHCP) Criteria Area to maintain habitat connectivity through the Core Area and Linkages, avoid impacts to major drainages in the composite footprint, and cross steep terrain. The design of these bridges would provide more than adequate undercrossing widths and heights for wildlife for Alternative 9 TWS DV and the other MCP Build Alternatives. Because wildlife movement is accommodated in the design of Alternative 9 TWS DV and the other MCP Build Alternatives, impacts to wildlife crossings would be less than significant and no mitigation is required.

The construction of Alternative 9 TWS DV and the other MCP Build Alternatives would result in the removal of mature trees within the project disturbance limits. Trees removed during construction would be replaced in accordance with Caltrans policies. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse impacts on mature trees or conflict with the local policies or ordinances protecting biological resources, and no mitigation is required.

#### **4.2.2.4 Geology and Soils [CEQA Checklist Questions VI.a(i) and VI.a(ii)]**

As discussed in Section 3.11 (Geology/Soils/Seismic/Topography), the MCP study area is not in a designated Alquist-Priolo Special Studies Zone<sup>1</sup> for fault rupture hazard. There are two major active fault zones capable of generating ground shaking during a seismic event that would affect any of the MCP Build Alternatives. Compliance with the applicable state and Caltrans seismic design criteria would prevent adverse seismic shaking and other effects on Alternative 9 TWS DV and the other MCP Build Alternatives associated with regional seismic conditions and activity. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse impacts related to rupture of a known earthquake fault or strong seismic ground shaking and other effects associated with regional seismic conditions and activity, and no mitigation is required.

#### **4.2.2.5 Hazards and Hazardous Materials (CEQA Checklist Questions VII.b and VII.c)**

There are several existing schools within 0.4 km (0.25 mi) of Alternative 9 TWS DV, including El Cerrito Middle School, Val Verde High School, Val Verde Elementary School, Sierra Vista Elementary School, Lakeside Middle School, and Mountain Shadows Middle School. Additional existing, as well as proposed schools, are located within 0.4 km (0.25 mi) of the other MCP Build Alternatives. As transportation facilities, Alternative 9 TWS DV and the other MCP Build Alternatives do not involve the release of hazardous emissions or the handling of acutely hazardous materials as part of their operation and therefore would not result in adverse impacts to schools within 0.4 km (0.25 mi) of the MCP project. PRC Sections 21154.4 and 25532 of the California Health and Safety Code are applicable to stationary sources. Emissions related to vehicle exhaust are discussed in Section 3.14 (Air Quality).

There is a possibility that activities during construction or traffic accidents during operation of the MCP could result in the release of hazardous materials. The transport of hazardous materials is subject to strict regulations and local emergency response agencies are trained to safely respond to accidental spills of hazardous substances on public roads. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would result in less than significant impacts to the public, to the

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<sup>1</sup> *Preliminary Geotechnical Design Report for the Project Report and Environmental Document, Mid County Parkway Project (Kleinfelder, 2007).*

environment, or to schools in relation to the release of hazardous materials, and no mitigation is required.

**4.2.2.6 Hydrology and Water Quality (CEQA Checklist Questions VIII.b, VIII.c, VIII.d, VIII.h, and VIII.i)**

In the MCP study area, the depth to groundwater ranges from 1.5 to 78 m (5 to 256 ft) below the surface. During borings conducted for the project geotechnical studies, groundwater was encountered at depths ranging from 3.4 to 14.6 m (11 to 48 ft). Dewatering activities are anticipated only in areas of deep excavation and/or shallow groundwater during construction of Alternative 9 TWS DV and the other MCP Build Alternatives. Operation of Alternative 9 TWS DV and the other MCP Build Alternatives would not use groundwater. With implementation of infiltration and detention basins, the additional impervious surface area associated with Alternative 9 TWS DV and the other MCP Build Alternatives would not substantially change the regional rate of recharge to the groundwater basin. Therefore, construction and operation of Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse impacts related to groundwater, and no mitigation is required.

Alternative 9 TWS DV would add 300 hectares (ha) (742 acres [ac]) of new pavement. Alternatives 4 and 5 would add 312 ha (771 ac), and Alternatives 6 and 7 would add 357 ha (882 ac) of new pavement. These increases in impervious area would increase the volume of runoff during a storm, which may lead to downstream erosion. Under Alternative 9 TWS DV and the other MCP Build Alternatives, major drainages such as the San Jacinto River and Temescal Wash would be spanned with bridges, and all drainages would be conveyed under the road facility via culverts or bridges. The design and construction of Alternative 9 TWS DV and the other MCP Build Alternatives will comply with Caltrans Standard Special Provisions to reduce the potential for erosion and siltation during construction and operations, and impacts to the course of a river or stream resulting in erosion or siltation on or offsite would be less than significant. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse impacts to drainage, and no mitigation is required.

Surface runoff from the MCP will be captured, treated, and discharged in a manner that will not result in flooding. In floodplain areas, bridges have been designed as part of the project to minimize floodplain encroachments and to maintain existing flows so that flooding risks are not increased upstream or downstream of the highway crossing. The maximum increase in water surface elevation of the 100-year flood

would be 0.02 m (0.065 ft) in the San Jacinto (SJ) Segment at the San Jacinto River Bridge in the Lakeview area, 0.11 m (0.35 ft) in the SJN Segment, 0.03 m (0.10 ft) in the SJS Segment, and 0.15 m (0.49 ft) in the Mead Valley (MV) Segment. Because these forecasted increases in 100-year flood water surface elevations under Alternative 9 TWS DV and the other MCP Build Alternatives are minimal and would not pose a substantial risk to existing structures in the floodplains, impacts to the existing drainage pattern of the area and potential flooding on or offsite are less than significant and no mitigation is required.

Alternative 9 TWS DV and the other MCP Build Alternatives would alleviate some existing flooding conditions in the area based on the design and construction of the bridges proposed as part of the MCP project. Because the MCP project has been designed to minimize floodplain impacts with elevated flyover bridges, viaducts, culverts, etc., Alternative 9 TWS DV and the other MCP Build Alternatives would result in a minimal change in the capacity of the San Jacinto River, Cajalco Creek, Temescal Wash, and the Perris Valley Storm Drain to carry water and would improve existing flooding conditions in the area. Alternative 9 TWS DV and the other MCP Build Alternatives would result in a minimal increase in flood heights and flood limits that would not result in any substantial change in flood risks or damage to life or property; therefore, no mitigation is required.

Alternative 9 TWS DV and the other MCP Build Alternatives include crossings of a number of drainages in the study area. Alternative 9 TWS DV would not result in the realignment of any of the drainages crossed by this alignment. As noted above, those crossings would be in bridges, viaducts, culverts, etc. However, Alternatives 4, 5, 6, and 7 would result in impacts to Cajalco Creek near Wood Road and Alexander Road. Cajalco Creek at this location would be realigned and channelized. During large storm events, the high flows would likely scour a new thalweg (centerline of the channel) within the new confined creek alignment. Therefore, the project impacts related to drainage and erosion at Cajalco Creek under Alternatives 4, 5, 6, and 7 would be significant and could not be mitigated to below a level of significance. Alternative 9 TWS DV would not result in impacts to Cajalco Creek related to realignment of this drainage. Therefore, impacts to drainage patterns under Alternative 9 TWS DV are less than significant and no mitigation is required.

#### **4.2.2.7 Population and Housing (CEQA Checklist Questions XII.a, XII.b, and XII.c)**

As discussed in detail in Section 3.2 (Growth), the MCP Build Alternatives would have little influence on the location, amount, rate, or type of growth in the area, based on consideration of existing and approved development in the area, and the integration of the MCP project in regional land use and transportation planning. While Alternative 9 TWS DV and portions of the other MCP Build Alternatives will construct a new roadway through areas of Corona, Perris, and San Jacinto, there has been no indication of developers intensifying or substantially modifying their development proposals in response to Alternative 9 TWS DV or the other MCP Build Alternatives. Alternative 9 is routed through areas (e.g., Gavilan Hills) where no such facility was previously planned; however, there are substantial constraints to development in this area, including steep terrain, limited access, and MSHCP conservation criteria. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse impacts related to population growth or direct and indirect impacts requiring new homes or businesses; therefore, no mitigation is required.

As discussed in detail in Section 3.4 (Community Impacts), Alternative 9 TWS DV and the other MCP Build Alternatives would result in the acquisition of existing residential uses and the relocation of the occupants of those residential uses. In addition, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in the construction of new housing. The number of residential relocations under Alternative 9 TWS DV and the other MCP Build Alternatives is not anticipated to require the construction of replacement housing. Considering the abundant housing stock developed in recent years within the MCP study area, as well as numerous other planned residential land development projects, a sufficient number of “comparable replacement dwellings” meeting decent, safe, and sanitary standards exist within the impacted or neighboring communities. It is anticipated that finding replacement housing for owner- or tenant-occupied residences will not present any unusual problems. The exception is those displaced from mobile homes. The current inventory for mobile home unit sales and rentals is scarce, and the area lacks in-kind mobile home replacement housing suitable as decent, safe, and sanitary. One option is for mobile home displacees to relocate into slightly larger single-family residences, resulting in a housing-of-last-resort entitlement under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act). “Last Resort Housing” payments by RCTC combined with additional resources in finding suitable single-family or multifamily residential replacement housing is anticipated to

minimize impacts during relocations. At this time, it is not known whether any property acquisitions will necessitate the need for construction of housing for relocated residents. Compliance with the Uniform Act offsets any potential impacts to communities due to relocations of housing and/or people that would necessitate the construction of replacement housing; therefore, no mitigation is required.

#### **4.2.2.8 Recreation (CEQA Checklist Question XIV.a)**

Alternative 9 TWS DV and the other MCP Build Alternatives will reduce the time-cost of travel and will provide improved transportation facilities in this part of western Riverside County, which may contribute to increased use of recreational facilities in this part of the county. However, the contribution of Alternative 9 TWS DV and the other MCP Build Alternatives to increased use of recreation facilities is anticipated to be very small, compared to the contribution of new residential uses developed in this area over time. As a result, Alternative 9 TWS DV and the other MCP Build Alternatives would result in a less than significant impact related to increased use of existing recreational facilities in this part of western Riverside County; therefore, no mitigation is required.

#### **4.2.2.9 Transportation/Traffic (CEQA Checklist Questions XV.a and XV.f)**

One of the main purposes of the MCP project is to provide capacity to support forecasted 2035 travel demand. As discussed in detail in Section 3.6 (Traffic and Transportation/Pedestrian and Bicycle Facilities), Alternative 9 TWS DV and the other MCP Build Alternatives will not cause an adverse increase in traffic load for the design year 2035 transportation system in the MCP study area. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives will not cause a substantial increase in traffic in relation to the existing and projected traffic load and capacity of the street system.

As discussed in detail in Section 3.2 (Growth), Alternative 9 TWS DV and the other MCP Build Alternatives are not expected to result in growth-related effects and would not result in land uses that would require parking. Any parking spaces acquired as part of the property acquisition for the project would be replaced or the owner adequately compensated for the loss of parking. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would result in less than significant impacts related to parking capacity.

#### **4.2.2.10 Utilities and Service Systems (CEQA Checklist Questions XVI.a through XVI.f)**

Alternative 9 TWS DV and the other MCP Build Alternatives would generate runoff that would be collected and treated on site prior to discharge off site.

Alternative 9 TWS DV and the other MCP Build Alternatives would not generate wastewater requiring treatment at a wastewater treatment facility. As a result, Alternative 9 TWS DV and the other MCP Build Alternatives would not result in adverse impacts related to wastewater treatment requirements, the need for additional wastewater treatment facilities, or exceedances of the ability of the area wastewater treatment providers to treat wastewater generated in their service areas; therefore no mitigation is required.

Alternative 9 TWS DV and the other MCP Build Alternatives would include appropriate storm water drainage, collection, control, treatment, and release facilities within the project right of way. New or expanded off-site storm water facilities are not anticipated under Alternative 9 TWS DV and the other MCP Build Alternatives. Therefore, the MCP project would not result in adverse impacts related to new storm water facilities, and no mitigation is required.

Alternative 9 TWS DV and the other MCP Build Alternatives are not anticipated to result in substantial demand for water supplies. Some water may be needed during project construction and as landscaping is planted to allow the landscaping to become established. However, the demand for water during construction and operation of Alternative 9 TWS DV and the other MCP Build Alternatives is not anticipated to exceed existing entitlements; therefore, no mitigation is required.

The construction of Alternative 9 TWS DV and the other MCP Build Alternatives would generate construction waste materials from demolished structures, vegetation, excess soil, concrete, rebar, and other similar materials. The construction contractors will be required to divert construction waste materials from landfills related to reduction, recycling, reuse, and composting. El Sobrante Landfill is the only landfill within the MCP study area; however, Badlands and Lamb Canyon Landfills are also in the vicinity of the project and may be utilized during construction. As a result, the total amount of construction waste material anticipated to be disposed of in area landfills under Alternative 9 TWS DV and the other MCP Build Alternatives would be limited and would not be expected to exceed the permitted capacity of these landfills.

During operation, waste material would be generated as part of landscape maintenance and picking up of litter along the road. Vegetative material generated during landscape maintenance would be disposed of at a composting facility. Trash and other waste collected along the road would be disposed of in area landfills. The total amount of trash and litter anticipated to be disposed of in area landfills under Alternative 9 TWS DV and the other MCP Build Alternatives would be limited and would not be expected to exceed the permitted capacity of those landfills; therefore, impacts to landfills are less than significant and no mitigation is required.

#### **4.2.3 Significant Environmental Effects of the Proposed Project that Can be Mitigated to Below a Level of Significance**

The majority of the significant adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives can be avoided, minimized, and/or mitigated to below a level of significance based on the measures identified for the project in Chapter 3. The full text of those measures is provided in the Environmental Commitments Record/Mitigation Monitoring and Reporting Program (ECR/MMRP) in Appendix F. The specific measures that would apply to Alternative 9 TWS DV and the other MCP Build Alternatives are discussed briefly in this section and in Section 4.3 (Mitigation Measures for Significant Impacts Under CEQA). Significant adverse project impacts that cannot be mitigated to below a level of significance are discussed later in Section 4.2.4, Unavoidable Significant Environmental Effects.

##### **4.2.3.1 Agricultural Resources (CEQA Checklist Questions II.b)**

As shown in Table 3.3.C (Impacts to Farmland per Hectare [Acre]) (Williamson Act Preserves) and Table 3.3.D, in Section 3.3 (Farmlands/Timberlands), Alternative 9 TWS DV and the other MCP Build Alternatives will result in the loss of designated Farmlands and will impact Williamson Act Preserves, thereby conflicting with existing zoning for agricultural uses and Williamson Act contracts; therefore, mitigation is required.

Implementation of Mitigation Measure AG-3 requires RCTC to comply with notifications required by the Williamson Act for acquisition of preserves for federal, state, and local public use, which would reduce impacts to existing zoning for agricultural use and Williamson Act contracts from Alternative 9 TWS DV and the other MCP Build Alternatives to below a level of significance.

#### **4.2.3.2 Air Quality (CEQA Checklist Question III.e)**

As discussed in Section 3.14 (Air Quality), construction of Alternative 9 TWS DV and the other MCP Build Alternatives may result in temporary, short-term increases in pollutant concentrations, specifically fugitive dust associated with excavation and grading. Construction may also potentially result in short-term objectionable odors.

Compliance with South Coast Air Quality Management District (SCAQMD) Rule 403, SCAQMD Standard Conditions SC-1 and SC-2, Caltrans Standard Conditions SC-3 through SC-14, and Mitigation Measures AQ-1 through AQ-13 would reduce those short-term adverse objectionable odor air quality impacts during construction of Alternative 9 TWS DV and the other MCP Build Alternatives to below a level of significance.

#### **4.2.3.3 Biological Resources (CEQA Checklist Questions IV.a, IV.b, IV.c, and IV.f)**

Impacts to the biological environment resulting from the MCP project are discussed in detail in Sections 3.17 through 3.22. Key findings relevant to the CEQA Checklist questions are discussed below.

Alternative 9 TWS DV and the other MCP Build Alternatives would result in 0.31 ha (0.77 ac) of direct impacts to habitat suitable for the long-term conservation of spreading navarretia.

Alternative 9 TWS DV would directly impact 0.9 ha (2.2 ac) of least Bell's vireo habitat suitable for long-term conservation. The direct impacts of the other MCP Build Alternatives on least Bell's vireo habitat would range from 2.5 ha (6.1 ac) to 3.4 ha (8.5 ac).

Alternative 9 TWS DV and the other MCP Build Alternatives would directly impact final designated critical habitat areas for coastal California gnatcatcher, San Bernardino kangaroo rat, and Quino checkerspot butterfly. Alternative 9 TWS DV would impact 16.2 ha (40.1 ac) of coastal California gnatcatcher final designated critical habitat, 1.2 ha (2.9 ac) of San Bernardino kangaroo rat critical habitat, and 132.6 ha (327.6 ac) of Quino checkerspot butterfly critical habitat.

Alternative 9 TWS DV would result in 68.3 ha (168.7 ac) of direct impacts to the Lake Mathews-Estelle Mountain Stephens' Kangaroo Rat Reserve established as part of the Habitat Conservation Plan for the Stephens' kangaroo rat. Alternatives 4, 5, 6,

7, and 9 would impact between 168.0 ha (415.1 ac) and 218.7 ha (540.3 ac) of the Stephens' Kangaroo Rat Reserve.

In addition to these direct impacts to candidate, sensitive, or special status species, Alternative 9 TWS DV and the other MCP Build Alternatives would result in indirect impacts on these species; therefore, mitigation is required to reduce impacts to candidate, sensitive, or special status species to below a level of significance.

Mitigation Measures TE-1 through TE-3 would avoid and minimize impacts to threatened and endangered species during construction of Alternative 9 TWS DV and the other MCP Build Alternatives. In addition, prior to the approval of the Final Environmental Impact Statement (FEIS), FHWA will conduct a Section 7 consultation with the United States Fish and Wildlife Service (USFWS) for impacts to coastal California gnatcatcher, Quino checkerspot butterfly, San Bernardino kangaroo rat, least Bell's vireo, and spreading navarretia. The Section 7 consultation would be based on the MSHCP consistency documentation prepared by RCTC. With implementation of Mitigation Measures TE-1 through TE-3, the impacts of Alternative 9 TWS DV and the other MCP Build Alternatives on sensitive species would be reduced to below a level of significance.

Alternative 9 TWS DV and the other MCP Build Alternatives would directly impact many-stemmed dudleya, smooth tarplant, and Coulter's goldfields. Mitigation Measure PS-1 would reduce the impacts of Alternative 9 TWS DV and the other MCP Build Alternatives on these plant species to below a level of significance.

Alternative 9 TWS DV and the other MCP Build Alternatives would permanently impact riparian habitat. Alternative 9 TWS DV would permanently impact 13.6 ha (32.7 ac) riparian/riverine areas and 175.6 ha (434.0 ac) of other upland natural communities of concern. Of this amount, Alternative 9 TWS DV would permanently impact 0.7 ha (1.6 ac) of riparian forest and 2.0 ha (5.0 ac) of riparian scrub. Mitigation Measures BIO-1 through BIO-3 would reduce the impacts of Alternative 9 TWS DV on natural communities, including riparian habitat, to below a level of significance.

Alternative 9 TWS DV and the other MCP Build Alternatives would result in temporary and permanent impacts to California Department of Fish and Game (CDFG) and United States Army Corps of Engineers (USACE) jurisdictional wetlands and other waters. Alternative 9 TWS DV would result in substantially fewer impacts to CDFG riparian habitat and streambeds, and wetlands and nonwetland

waters of the United States under USACE jurisdiction. Alternatives 4 and 5 would have greater impacts than Alternative 9 TWS DV, and Alternatives 6 and 7 would have the greatest impacts on these waters of all the MCP Build Alternatives. Specifically, Alternative 9 TWS DV would temporarily impact 3.5 ha (8.5 ac) of CDFG jurisdictional riparian habitat and streambeds, 1.9 ha (4.7 ac) of USACE jurisdictional wetlands, and 1.5 ha (3.7 ac) of USACE jurisdictional nonwetland waters. Alternative 9 TWS DV would permanently impact 6.3 ha (15.5 ac) of CDFG jurisdictional riparian habitat and streambeds, 1.0 ha (2.4 ac) of USACE jurisdictional wetlands, and 3.4 ha (8.4 ac) of USACE jurisdictional nonwetland waters.

In addition to the direct impacts discussed above, Alternative 9 TWS DV and the other MCP Build Alternatives may result in indirect impacts on wetlands and other waters. Those indirect impacts may result from growth-related and edge effects such as exotic plant infestations, pollutants from storm water runoff from the road, and unauthorized recreational use.

Prior to the initiation of construction, the RCTC would obtain a Section 404 permit from the USACE, a Section 1602 Agreement for Streambed Alteration from the CDFG, and a Section 401 certification or waiver from the Santa Ana Regional Water Quality Control Board (RWQCB). Detailed mitigation requirements for the impacts on wetlands and other waters would be negotiated with each agency during the permit process. In addition to those detailed mitigation requirements, Mitigation Measures WET-1 through WET-4 would reduce impacts of Alternative 9 TWS DV and the other MCP Build Alternatives to jurisdictional waters to below a level of significance.

The federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code prohibit the destruction of active bird nests. During construction of Alternative 9 TWS DV and the other MCP Build Alternatives, there is potential for adverse impacts to active nests in trees removed to accommodate the project construction, and mitigation is required. Mitigation Measure AS-4 requires that during construction, vegetation clearing would be conducted outside the nesting season (March 1–September 15) for birds. Mitigation Measure AS-4 would reduce impacts on nesting birds during construction of Alternative 9 TWS DV and the other MCP Build Alternatives to below a level of significance.

Alternative 9 TWS DV and the other MCP Build Alternatives and design variations would directly impact approximately 16.2 ha (40.0 ac) of Los Angeles pocket mouse occupied habitat suitable for long-term conservation in the vicinity of the San Jacinto

River just east of Lake Perris and in the San Jacinto River area near the MCP/State Route 79 (SR-79) interchange; therefore, mitigation is required. Mitigation Measure AS-3 requires RCTC to obtain a Determination of Biologically Equivalent or Superior Preservation (DBESP) for impacts to Los Angeles pocket mouse near Lake Perris, where 90 percent or more of those portions of the site that provide for the long-term conservation value of Los Angeles pocket mouse cannot be avoided. Therefore, the project impacts would be reduced to below a level of significance.

Burrowing owls were not observed within the footprints of Alternatives 4, 5, 6, 7, and Alternative 9 TWS DV; therefore, direct and indirect impacts to burrowing owls under these alternatives are not anticipated. Prior to construction activities for Alternative 9 TWS DV and the other MCP Build Alternatives, focused burrowing owl surveys would be conducted. In addition, take of active burrowing owl nests would be avoided. Mitigation Measures AS-1 and AS-2 would reduce the impacts of Alternative 9 TWS DV and the other MCP Build Alternatives on nesting burrowing owls to below a level of significance.

The following Habitat Conservation Plans and Natural Communities Conservation Plans are applicable to Alternative 9 TWS DV and the other MCP Build Alternatives:

- Western Riverside County MSHCP
- Habitat Conservation Plan for the Stephens' kangaroo rat
- Lake Mathews/Estelle Mountain Stephens' Kangaroo Rat Reserve area
- El Sobrante Landfill MSHCP

Alternative 9 TWS DV impacts 256.8 ha (634.5 ac) of MSHCP Criteria Area, 8.9 ha (22.1 ac) of El Sobrante Landfill MSHCP area, and 68.3 ha (168.7 ac) of the Lake Mathews-Estelle Mountain Stephens' Kangaroo Rat Reserve established through the Habitat Conservation Plan for the Stephens' kangaroo rat. Alternative 9 TWS DV, aligned south of Lake Mathews, does not pass through the Lake Mathews MSHCP area; therefore, there would be no direct impacts to lands or species in the Lake Mathews MSHCP area under this alternative. In addition to Mitigation Measures HCP-1 through HCP-3, mitigation for impacts of the Alternative 9 TWS DV to Habitat Conservation Plans and Natural Communities Conservation Plans will be achieved through compliance with provisions of the western Riverside County MSHCP, the El Sobrante Landfill MSHCP, and the Habitat Conservation Plan for the Stephens' kangaroo rat. These MSHCPs, Habitat Conservation Plans, and Natural Communities Conservation Plans were conceived, developed, and are being

implemented specifically to address the direct, indirect, cumulative, and growth-related effects on species and habitats in western Riverside County resulting from activities covered by the MSHCP, including the MCP project. Mitigation Measures HCP-1 through HCP-3 and compliance with applicable Habitat Conservation Plans and Natural Conservation Plans would reduce the impacts of Alternative 9 TWS DV and the other MCP Build Alternatives on MSHCP, Habitat Conservation Plan, and Natural Communities Conservation Plan areas to below a level of significance.

#### **4.2.3.4 Paleontological Resources (CEQA Checklist Question V.c)**

As discussed in Section 3.12 (Paleontology), Alternative 9 TWS DV and the other MCP Build Alternatives may directly or indirectly impact unique paleontological resources during construction. The MCP Build Alternatives have a high level of sensitivity for the presence of paleontological resources. Mitigation Measure PAL-1 would reduce the adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives on paleontological resources or sites to below a level of significance because the measure would require resource surveillance and recovery procedures to ensure a less than significant impact to any paleontological resources discovered during construction activities.

#### **4.2.3.5 Geology and Soils [CEQA Checklist Questions VI.a(iii), VI.a(iv), VI.b, VI.c, and VI.d]**

As discussed in Section 3.11 (Geology/Soils/Seismic/Topography), the potential for liquefaction would affect Alternative 9 TWS DV and the other MCP Build Alternatives, specifically in areas of shallow groundwater in the Temescal Wash and Bedford Wash areas, the San Jacinto River, Perris Valley, and Mead Valley. There are areas with potential natural slope instability in the western part of the study area and in the Bernasconi Hills; however, the MCP Build Alternative alignments are not in areas of known landslides or slope instability. The potential for soil expansion to affect Alternative 9 TWS DV and the other MCP Build Alternatives ranges from low to high, depending on the nature of the soils and underlying parent bedrock materials along the alignments. Residual soils in the area may also be expansive.

Construction activity may temporarily increase soil erosion and the loss of topsoil along the alignment of Alternative 9 TWS DV and the other MCP Build Alternatives.

Potential impacts of Alternative 9 TWS DV and the other MCP Build Alternatives related to liquefaction, landslides, soil erosion or loss of topsoil, expansive soils, and

seismic issues resulting from an unstable geologic unit or soil would be reduced to below a level of significance with implementation of Mitigation Measures GEO-1 through GEO-5 since RCTC will prepare a design-level geotechnical report to further analyze site conditions, design slopes to reduce impacts to soils and erosion, improve site conditions with soil binding plants with low water requirements, comply with a quality assurance/quality control plan, and locate all groundwater wells within the project footprint and ensure they are abandoned properly.

#### **4.2.3.6 Hazards and Hazardous Materials (CEQA Checklist Questions VII.a, VII.d, VII.g, and VII.h)**

As discussed in detail in Section 3.13 (Hazardous Waste/Materials), during construction of Alternative 9 TWS DV and the other MCP Build Alternatives, there is the potential to encounter hazardous materials in the soils, traffic-striping materials, transformers, buildings, and existing road structures. In addition, there are existing hazardous materials sites within and immediately adjacent to the right of way for Alternative 9 TWS DV and the other MCP Build Alternatives. Sites listed under California Government Code 65962.5 are shown as “Hazardous Release Sites” on Figure 3.13.1 in Section 3.13. Preliminary Site Investigations (PSIs) would be performed on all hazardous materials sites within the right of way to determine the potential hazardous materials on site. Hazardous materials spills and other contamination associated with property acquired for Alternative 9 TWS DV or the other MCP Build Alternatives would be remediated prior to project construction. Construction of Alternative 9 TWS DV and the other MCP Build Alternatives could result in exposure to asbestos, lead, and other hazardous substances as a result of demolition of existing structures. Mitigation Measures HW-1 through HW-10 would reduce potential adverse impacts from routine transport, use, or disposal of hazardous materials and hazardous material sites from implementation of Alternative 9 TWS DV and the other MCP Build Alternatives to below a level of significance.

As discussed in Section 3.5 (Utilities/Emergency Services), construction activities could result in traffic delays that could affect the ability of fire and emergency service providers to meet response time goals under Alternative 9 TWS DV and the other MCP Build Alternatives. Medical emergencies could increase with the presence of construction workers and heavy machinery during construction and with the presence of vehicles during operation of Alternative 9 TWS DV or the other MCP Build Alternatives. In the case of such emergencies, construction activities could potentially limit or block emergency service access. Mitigation Measures U&ES-8 and TR-2

would reduce this adverse impact to emergency response from Alternative 9 TWS DV and the other MCP Build Alternatives to below a level of significance.

As discussed in Section 3.5, the risk of wildfires would increase during construction and operation of Alternative 9 TWS DV or the other MCP Build Alternatives because these alternatives traverse large areas of vacant (primarily habitat reserve) lands. This land is covered with both native and nonnative vegetation that is highly flammable during the dry season. In addition, there are limited roads and very little irrigated land in this area that could act as fire breaks. Mitigation Measures U&ES-2 through U&ES-8 would substantially reduce adverse impacts involving wildfires from Alternative 9 TWS DV to below a level of significance.

#### **4.2.3.7 Hydrology and Water Quality (CEQA Checklist Questions VIII.a, VIII.e, VIII.f, and VIII.j)**

As discussed in detail in Section 3.10 (Water Quality and Storm Water Runoff), during construction of Alternative 9 TWS DV and the other MCP Build Alternatives, there is the potential for soil erosion and discharge of pollutants into receiving waters. There would be an increase in impervious area with implementation of any MCP Build Alternative, which would increase the volume of runoff during a storm and increase pollutant loading to receiving waters. Therefore, because of the potential for significant impacts to water quality standards, runoff water that would exceed the capacity of existing or planned storm water drainage systems, and to water quality with implementation of the MCP project, mitigation has been identified (Mitigation Measures WQ-1 through WQ-4) to reduce these potential impacts to less than significant. Mitigation Measure WQ-1 requires compliance with the *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit)* Order No. 99-08-DWQ, NPDES No. CAS000002 during construction and would minimize potential water quality impacts associated with construction of Alternative 9 TWS DV and the other MCP Build Alternatives. If dewatering is necessary during construction, Mitigation Measure WQ-2 requires compliance with the De Minimus permit to minimize water quality impacts associated with dewatering activities. Mitigation Measure WQ-3 requires the procedures outlined in Caltrans *Storm Water Quality Handbooks*, Project Planning and Design Guide to be used for implementing Design Pollution Prevention and Treatment Best Management Practices (BMPs) for the project. Mitigation Measure WQ-4 requires implementation of infiltration basins and biostrips or detention basins and bioswales to minimize the potential adverse water quality impacts associated with operation of Alternative 9 TWS DV and the

other MCP Build Alternatives. Mitigation Measures WQ-1 through WQ-4 would reduce potential adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives related to water quality to below a level of significance.

Liquefaction and seismically induced settlement resulting in inundation from mud flow are additional potential adverse impacts associated with seismic shaking. Areas subject to liquefaction and seismically induced settlement include Temescal Wash, Bedford Wash, San Jacinto River, San Jacinto Valley, Perris Valley, and locally in Mead Valley. Potential impacts due to liquefaction and seismically induced settlement would be reduced through project planning, design, and construction. Site-specific geotechnical investigations would be completed during final design to evaluate the liquefaction potential at areas of specific project components and provide recommendations to reduce the risks associated with soil liquefaction to a level of below significance.

#### **4.2.3.8 Land Use and Planning (CEQA Checklist Question IX.a)**

As discussed in Section 3.1 (Land Use) and Section 3.4 (Community Impacts), Alternative 9 TWS DV and the other MCP Build Alternatives would result in physical changes to existing land uses and nearby communities. MCP Build Alternatives 4 through 7 have the potential to divide the established community of Mead Valley. Alternative 9 TWS DV would impact community cohesiveness in the Gavilan Hills and Perris areas. Property acquisition would result from all of the MCP Build Alternatives, and would result in the relocation of residents, established businesses, and places of employment.

Overcrossings and undercrossings are provided as project design features to maintain connectivity within the areas bisected by the MCP project. Mitigation Measure LU-4 would reduce long-term impacts from Alternative 9 TWS DV to community cohesiveness in the Perris area by providing replacement park acreage and facilities to offset the loss of acreage and facilities in Paragon Park. Therefore, permanent impacts to existing communities are less than significant. As discussed in Section 3.4 (Community Impacts), all property acquisitions and relocations for the MCP project would be handled in accordance with the Uniform Act (Public Law 91-646, 84 Stat. 1894). Mitigation Measure LU-1 would reduce temporary impacts to community cohesiveness during construction by ensuring that vehicles, bicycle, equestrian, and pedestrian circulation and access are maintained, therefore reducing impacts to established communities to below a level of significance.

#### **4.2.3.9 Noise (CEQA Checklist Question XI.d)**

Sensitive receptors would be exposed to construction noise during construction of Alternative 9 TWS DV and the other MCP Build Alternatives. The closest sensitive receptors are 15 m (50 ft) from the project construction areas, and may be subject to short-term noise reaching 95 dBA  $L_{max}$  (maximum sound level measured in A-weighted decibels) generated by construction activities. Compliance with Caltrans Standard Specifications, Section 5-1, “Sound Control Requirements,” in the Standard Special Provisions would substantially reduce the temporary and periodic increase in noise levels from construction under Alternative 9 TWS DV and other MCP Build Alternatives to below a level of significance.

#### **4.2.3.10 Public Services (CEQA Checklist Question XIII.a)**

As discussed in Section 3.5 (Utilities/Emergency Services) and as discussed earlier in this section under Hazards and Hazardous Materials, the construction and operation of Alternative 9 TWS DV and the other MCP Build Alternatives could result in adverse impacts on fire and police protection services. Those adverse impacts would be reduced to below a level of significance based on implementation of Mitigation Measures U&ES-2 through U&ES-8 and TR-2. Alternative 9 TWS DV and the other MCP Build Alternatives would result in partial acquisition of property from the Temescal Public Safety Facility at 3777 Bedford Canyon Road in the city of Corona. In addition, Alternative 9 TWS DV would result in a direct impact on the Riverside County Fire Station and Police Substation No. 90 at 333 Placentia Avenue in the City of Perris. This station is proposed to be relocated to the northeast corner of the Redlands Avenue/Placentia Avenue intersection.

As discussed in Section 3.4 (Community Impacts), Alternatives 4 and 5 would result in the acquisition of property from Val Verde High School at 975 West Morgan Street in the city of Perris. Approximately 7,246 square meters (sq m) (78,000 square feet [sf]) of property currently occupied by portable classrooms at Val Verde High School<sup>1</sup> and approximately 6,503 sq m (70,000 sf) of the Val Verde Unified School District Administration and Facilities Operation Building<sup>2</sup> would be impacted by Alternatives 5 and 6.

The adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives related to the acquisition of property from these public facilities would

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<sup>1</sup> EPIC right of way data, 2006.

<sup>2</sup> Ibid.

be reduced to below a level of significance based on implementation of Mitigation Measure U&ES-1.

#### **4.2.3.11 Recreation (CEQA Checklist Question XIV.b)**

As discussed above and in detail in Section 3.1 (Land Use), Alternative 9 TWS DV would result in the acquisition of a part of existing Paragon Park in the city of Perris. The part of the park to be acquired includes tennis courts, a basketball court, four handball courts, and a playground. Alternative 9 TWS DV includes a detention basin on the north side of the MCP alignment, east of Redlands Avenue. To ensure compliance with the California Public Parks Preservation Act and to avoid net losses in parklands, part of the area occupied by the detention basin would be developed in active and passive recreation uses and landscaping to replace the impacted area and facilities at Paragon Park under Alternative 9 TWS DV. Mitigation Measure LU-4 ensures this replacement of the land used from Paragon Park in the detention basin; therefore, impacts are reduced to less than significant.

MCP Build Alternatives 4, 5, 6, 7, and 9 would all result in the acquisition of a small amount of land from the planned El Cerrito Sports Park. The acquisition would affect the edges of sports fields, but these impacts can be addressed with minor modifications in the site plan for this sports park.

#### **4.2.3.12 Traffic/Transportation (CEQA Checklist Questions XV.e, XV.f, and XV.g)**

During construction of Alternative 9 TWS DV and the other MCP Build Alternatives, traffic would be temporarily detoured or delayed, which may result in a temporary increase in emergency response times in the project area. As discussed in detail in Section 3.6 (Traffic and Transportation/Pedestrian and Bicycle Facilities), Mitigation Measure TR-2 will provide for a Traffic Management Plan during construction that would substantially reduce the temporary adverse traffic impacts under Alternative 9 TWS DV and the other MCP Build Alternatives to below a level of significance.

There are numerous planned bicycle, equestrian, and hiking trails within the MCP study area where the MCP project will be required to provide new roadway connections with bicycle and pedestrian facilities in locations where local streets will cross the MCP project. In addition, a Class I (off-road) trail is planned for the entire length of Cajalco Road and Ramona Expressway, and the MCP Build Alternatives would remove segments of these two roads. Therefore, mitigation is required to reduce impacts to alternative transportation. Mitigation Measure TR-3

requires RCTC to coordinate with each affected local jurisdiction to determine an appropriate rerouting of any planned trail that would be impacted by the MCP project in order to maintain continuity and connectivity of the regional trail system. Implementation of Mitigation Measure TR-3 would reduce impacts to alternative transportation policies, plans, and programs to less than significant.

#### **4.2.3.13 Mandatory Findings of Significance (CEQA Checklist Question XVII.a)**

Alternative 9 TWS DV and the other MCP Build Alternatives have the potential to degrade the environment as a result of impacts on plant communities and habitats and on archeological resources. Avoidance, minimization, and mitigation measures provided in the Environmental Commitments Record/Mitigation Monitoring and Reporting Program (ECR/MMRP) in Appendix F would substantially reduce those impacts of Alternative 9 TWS DV and the other MCP Build Alternatives to below a level of significance.

#### **4.2.4 Unavoidable Significant Environmental Effects**

As discussed above, the majority of the significant adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives can be substantially avoided, minimized, and/or mitigated to below a level of significance based on the measures provided in the ECR/MMRP in Appendix F. However, some significant adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives cannot be reduced to below a level of significance. Those unavoidable adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives are discussed below. The specific avoidance, minimization, and mitigation measures that would apply to these significant adverse impacts of Alternative 9 TWS DV and other MCP Build Alternatives are discussed briefly in this section and in Section 4.3 (Mitigation Measures for Significant Impacts Under CEQA).

##### **4.2.4.1 Aesthetics (CEQA Checklist Questions I.a through I.d)**

As discussed in detail in Section 3.7 (Visual/Aesthetics), Alternative 9 TWS DV and the other MCP Build Alternatives would result in adverse impacts on scenic vistas, would substantially damage scenic resources, would substantially degrade the existing visual character and quality in the project area, and would create new sources of substantial light and glare. Mitigation Measures VIS-1 through VIS-8 would reduce the adverse impacts of Alternative 9 TWS DV and the other MCP Build Alternatives; however, even with implementation of mitigation, these impacts cannot

be reduced to a level below significant. The MCP project will alter the existing scenic resources to an extent where the project landscape plans, the aesthetic enhancements to soundwalls, and the additional visually pleasing hardscapes required in mitigation would not reduce the overall impact of the project to less than significant. As a result, Alternative 9 TWS DV and the other MCP Build Alternatives would result in significant unavoidable adverse impacts to scenic vistas, scenic resources, existing visual character and quality of the project area, and new sources of light and glare.

#### **4.2.4.2 Agricultural Resources (CEQA Checklist Question II.a)**

As shown in Table 3.3.C (Impacts to Farmland per Hectare [Acre]), in Section 3.3 (Farmlands/Timberlands), Alternative 9 TWS DV and the other MCP Build Alternatives will result in the loss of designated Farmlands. Mitigation Measures AG-1, AG-2, and AG-4 would assist in reducing impacts of Alternative 9 TWS DV and the other MCP Build Alternatives; however, because the farmlands cannot be replaced in-kind, the project impacts to designated Farmlands are unavoidable and significant.

#### **4.2.4.3 Cultural Resources (CEQA Checklist Questions V.a, V.b, and V.d)**

As the result of the phased approach used for the Section 106 process for the MCP project, only those cultural resources affected by the Locally Preferred Alternative (Alternative 9 TWS DV) are being evaluated with the exception of historic resources that qualify as Section 4(f) properties, which are being evaluated for all the MCP Build Alternatives. CEQA and Public Resources Code (PRC) Section 5024 require state agencies to identify and preserve state-owned historical resources that are eligible for the National Register of Historic Places (National Register). Identification efforts were made for cultural resources on all the MCP Build Alternatives. These efforts included, research, field survey, and consultation with Indian Tribes and historic groups. However, under the Section 106 phased approach, only archaeological resources within Alternative 9 TWS DV underwent Phase II excavation to determine eligibility for listing in the National Register. The level of effort for Alternative 9 TWS DV and the other MCP Build Alternatives is adequate for the purposes of Section 106 and CEQA and documents that no National Register eligible state-owned historical resources are located within the area of area of potential effects (APE).

Historic properties under Section 106 of the National Historic Preservation Act (NHPA) that are discussed in Section 3.8 are also considered historical resources for

the purpose of CEQA. Based on the information provided in Section 3.8, a total of 11 historical resources occur within the total limits of all the MCP Build Alternatives.

The 11 historical resources comprise:

- Six archaeological sites (P-33-1512, P-33-1650/P-33-16687, P-33-4759/H, P-33-13791, P-33-16598, and P-33-16679) that are eligible for the National Register and the California Register of Historical Resources (California Register);
- Three archaeological sites (P-33-1649, P-33-12230, and LSA-JCV531-S-207) that are assumed eligible for the National and California Registers and will be protected with the use of Environmentally Sensitive Areas (ESAs) during project construction; and
- As discussed in the *Preliminary Recommendations of Eligibility and Levels of Effect* (LSA Associates, Inc., 2008), two historical resources that were identified in the project alternatives: the C.B. Bullock House (P-33-7640) and the CBJ (Burrows) Dairy.

Pursuant to CEQA Guidelines Section 15064.5(b), a project may cause a substantial adverse change in the significance of an historical resource if it results in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired.

Table 4.2.C lists the 11 historical resources in the MCP Build Alternatives and indicates which alternatives impact these resources. As shown, Alternative 9 TWS DV will impact and at least partially demolish three historical resources: P-33-1512, P-33-1650/P-33-16687, and P-33-16679. As a result, under CEQA there will be a Substantial Adverse Change to these three resources under Alternative 9 TWS DV and mitigation is required.

Under CEQA, there will be a finding of no substantial adverse change for historical resource P-33-16598 for Alternative 9 TWS DV because the part of that site within the disturbance limits for Alternative 9 TWS DV is not a contributing element to the overall eligibility for listing of this site in the California Register. However, mitigation is still required to address the direct effects of Alternative 9 TWS DV to P-33-16598.

**Table 4.2.C Summary of Historical Resources**

Resources Determined Significant	MCP Alternatives that Impact Resource						Summary of Effect
	4	5	6	7	9	9 SJN DV	
P-33-1512, Prehistoric Quarry Site					X		Alternative 9 TWS DV would result in the physical destruction of the southern third of P-33-1512, with the exception of the southernmost tip. The other MCP Build Alternatives avoid this resource.
P-33-1649, Prehistoric Quarry, ESA					X		This resource will be protected by ESAs during construction and will experience no adverse effect under Alternative 9 TWS DV. Under Alternative 9 TWS DV, there would be no substantial adverse change.
P-33-1650/33-16687, Prehistoric Quarry Site					X		Alternative 9 TWS DV would result in the physical destruction of roughly the eastern 60 percent of the site. The other MCP Build Alternatives avoid this site.
P-33-4759/H, Cajalco Tin Mine District			X	X			Alternatives 6 and 7 pass through Site 33-4759, resulting in the same use/take of this historic site: 25.2 ha (62.5 ac). Alternatives 4, 5, and 9 avoid this site.
P-33-7640, C.B. Bullock House	X		X				This resource would be impacted by Alternatives 4 and 6 and may result in a substantial adverse change to the site under CEQA. Alternatives 5, 7, and 9 avoid this site.
P-33-12230, Prehistoric Habitation Site, ESA					X		This resource will be protected by ESAs during construction and will have no adverse effect for Alternatives 4, 5, 6, and 7. Under Alternative 9 TWS DV, there would be no substantial adverse change.
P-33-13791, Prehistoric Village Site	X	X	X	X			Three site loci (33-816, 33-817, and 33-818) are located within the direct area of potential effects (APE) for Alternatives 4, 5, 6, and 7, which all result in the same use of this historic site: 8.3 ha (20.5 ac). Alternative 9 avoids this site.
P-33-16598, Multi-use Prehistoric Site	X	X	X	X	X		All the MCP Build Alternatives except the SJN DV would result in the physical destruction of the northeastern 7 percent of P-33-16598. The area that would be impacted is highly disturbed and does not contribute to the overall site eligibility for the National or California Registers. Therefore, the direct effect would not be adverse to the historic property under NEPA, and there would not be a substantial adverse change to the historical resource under CEQA.

**Table 4.2.C Summary of Historical Resources**

	MCP Alternatives that Impact Resource						
P-33-16679, Multi-use Prehistoric Site					X		Alternative 9 TWS DV would result in the physical destruction of 95 percent of P-33-16679. Therefore, there would be an adverse effect to this historic site under NEPA and a substantial adverse change to the historical resource under CEQA. The other MCP Build Alternatives avoid this site.
LSA-JCV531-S-207, ESA					X		This resource will be protected by ESAs and will have no adverse effect. Under Alternative 9 TWS DV, there would be no substantial adverse change.
CBJ (Burrows) Dairy	X	X	X	X	X	X	The CBJ (Burrows) Dairy falls within the APE for Alternatives 4, 5, 6, 7, and 9. The majority of the resource and its structures are located within the SJN DV. Only a small part of the vacant area on the eastern end of the property falls into the SJS segment alignment, which is common to all MCP Build Alternatives. No effect except under the SJN DV.

ac = acres  
 California Register = California Register of Historical Resources  
 CEQA = California Environmental Quality Act  
 ESA = Environmentally Sensitive Area  
 ha = hectares  
 MCP = Mid County Parkway  
 National Register = National Register of Historic Places  
 NEPA = National Environmental Policy Act  
 SJN DV = San Jacinto North Design Variation

There will also be a finding of no substantial adverse change for three sites within Alternative 9 TWS DV that will be protected by ESAs: P-33-1649, P-33-12230, and LSA-JCV531-S-207. Alternative 9 TWS DV will not impact, demolish, or otherwise materially alter these properties in an adverse manner and will not result in a significant impact to these resources; therefore, no mitigation is required.

The C.B. Bullock House does not fall within Alternative 9 TWS DV. The CBJ (Burrows) Dairy does fall within Alternative 9 TWS DV on both the San Jacinto South (SJS) and South Jacinto North (SJN) segments. Specifically, the majority of the resource and its structures are located within Segment SJN, which is a design. Only a small part of the vacant land found on the eastern end of the property falls into Segment SJS. Segment SJS is part of Alternative 9 TWS DV. Alternative 9 TWS DV will have only a minor impact on the CBJ (Burrows) Dairy, and it will not impact,

demolish, or otherwise materially alter the property in an adverse manner and will not result in a significant impact to the resource; therefore, no mitigation is required.

In addition, as discussed in Section 3.8 (Cultural Resources), Alternative 9 TWS DV and the other MCP Build Alternatives may result in adverse impacts to previously unknown cultural resources in the MCP APE that may be discovered during construction. These impacts could potentially result in a substantial adverse change in the significance of previously unknown historical resources pursuant to Section 15064.5 of the *CEQA Guidelines*; therefore, mitigation is required.

Mitigation Measure AR-1 requires preparation of an Archaeological Monitoring Plan to establish procedures for archaeological resource surveillance and procedures for temporarily halting or redirecting work to permit identification, sampling, and evaluation of archaeological resources. Mitigation Measure AR-1 provides specific instruction for data recovery at three sites (P-33-1512, P-33-1650/P-16687, and P-16679) and recommended the maintenance of an ESA for three known archaeological sites (P-33-1649, P-33-12230, and LSA-JCV531-S-207). While the Archaeological Monitoring Plan is meant to reduce the potential for impacts to resources, the measure cannot reduce impacts to a level less than significant.

There are no documented locations of human remains in the disturbance limits for Alternative 9 TWS DV and the other MCP Build Alternatives; however, there is the potential that previously undocumented human remains could be disturbed during construction of the MCP project. Therefore, as discussed in Mitigation Measure AR-1, should any undocumented human remains be discovered, the construction contractor would comply with State Health and Safety Code Section 7050.5 by ceasing activity in any area or nearby area suspected to overlie remains and contacting the County Coroner. If the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendant (MLD) pursuant to Public Resources Code Section 5097.98 and California Code of Regulations Section 15064.5. If previously undocumented human remains cannot be avoided by the MCP project, compliance would not likely reduce those adverse impacts to below a level of significance; therefore, these impacts of the MCP project would be significant and unavoidable.

#### **4.2.4.4 Land Use and Planning (CEQA Checklist Questions IX.b and IX.c)**

As discussed in detail in Section 3.1 (Land Use), Alternative 9 TWS DV and the other MCP Build Alternatives would impact existing land uses. Alternative 9 TWS DV and the other MCP Build Alternatives are inconsistent with some of the goals and policies of several elements of the General Plans of Riverside County and the Cities of Corona, Perris and San Jacinto, and construction of the project would temporarily impact access to residences and businesses. Appropriate signage, temporary sidewalks, and a public information field office will be required to notify communities prior to construction, as indicated in Mitigation Measures LU-1 and LU-2. Alternative 9 TWS DV and the other MCP Build Alternatives will require amendments to the applicable General Plans, as indicated in Mitigation Measure LU-3, to reflect the final MCP alignment, interchange locations, and to change the land use designations on property that would be acquired for the project to a transportation or public use designation. In addition, Alternative 9 TWS DV and the other MCP Build Alternatives would result in adverse impacts on existing Habitat Conservation Plans, including Lake Mathews MSHCP, El Sobrante Landfill MSHCP, and the Lake Mathews-Estelle Mountain Stephens' Kangaroo Rat Reserve, as follows:

- Lake Mathews MSHCP: Impacted by Alternatives 4, 5, 6, and 7; avoided by Alternative 9 TWS DV.
- El Sobrante Landfill MSHCP Plan Area: Impacted by Alternatives 4, 5, and 9 TWS DV; avoided by Alternatives 6 and 7. Alternatives 4, 5, and 9 TWS DV all result in the same amount of impact on this MSHCP Plan Area.
- Lake Mathews-Estelle Mountain Stephens' Kangaroo Rat Reserve: Impacted by Alternatives 4, 5, 6, 7, and 9 TWS DV. Alternative 9 TWS DV would result in the least amount of impact on this reserve of all the MCP Build Alternatives.

Mitigation to reduce the potential impacts of Alternative 9 TWS DV and the other MCP Build Alternatives on these plans and reserves is provided in Mitigation Measures LU-3, HCP-1, and HCP-2. However, because the Cities, County, and permittees of each Habitat Conservation Plan have the overall discretionary action to amend their respective plans, impacts of the project to Habitat Conservation Plans are significant and unavoidable because RCTC cannot ensure at this time these plans will be amended.

#### **4.2.4.5 Noise (CEQA Checklist Questions XI.a and XI.c)**

As discussed in detail in Section 3.15 (Noise), sensitive receptors would be exposed to noise levels exceeding the noise abatement criteria (NAC) under all MCP Build Alternatives. Soundwalls that are considered both reasonable and feasible would be constructed to minimize these impacts. However, under all MCP Alternatives, sensitive receptors would still be exposed to noise levels exceeding the NAC.

Alternative 9 would increase the noise levels at the following receptors where soundwalls were not found to be reasonable and feasible and, as a result, the noise levels would exceed or continue to exceed the NAC: R-62, R-63, R-64, R-70, R-75, R-76, R-80, R-85, R-89, R-90, R-96, R-97, R-127, R-129, R-131, R-143, R-158, R-160, R-161, R-162, R-163, R-164, R-168, R-170, R-178, R-179, R-180, R-181, R-187, R-188, R-190, and R-235. Tables and maps showing these receptor locations and receptors affected by the other MCP Build Alternatives are provided in Section 3.15.

As discussed above, Alternative 9 would result in long-term noise impacts at sensitive receptor locations. The future with project noise levels would significantly exceed (a greater than a 3 A-weighted decibel [dBA] increase) the No Build Alternative noise levels at the following receptor locations where soundwalls were not found to be reasonable and feasible: R-63, R-64, R-76, R-89, R-90, R-127, R-143, R-144, R-145, R-158, R-159, R-164, R-170, R-179, R-180, R-181, R-187, R-188, R-223, R-224, and R-235. Therefore, the MCP project would result in a generation of noise levels in excess of NAC standards and a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, even with implementation of soundwalls; therefore, impacts are significant and unavoidable.

#### **4.2.4.6 Transportation/Traffic (CEQA Checklist Question XV.b)**

As discussed in detail in Section 3.6 (Traffic and Transportation/Pedestrian and Bicycle Facilities), for purposes of establishing traffic impacts for the MCP project consistent with Caltrans procedures, roads and intersections were considered to be operating adequately if they operated at level of service (LOS) C or better. In cases where improvement to LOS C was considered infeasible, Caltrans procedures indicate that roads and intersections can be considered to be operating adequately if they operate at LOS D or better. This method of determining significance was selected to be consistent with Caltrans procedures as indicated in the MCP *Traffic Technical Report* (VRPA, 2008) even though some local jurisdictions have less stringent requirements. In the case of the freeway mainline segments, ramps and weaving areas, operation at LOS D or better was considered to be adequate.

Most of the freeways, ramps, and intersections in the MCP study area are expected to operate at acceptable LOS in 2035 for Alternative 9 TWS DV and the other MCP Build Alternatives, with exceptions at I-15, Interstate 215 (I-215), and local circulation, as explained in detail in Section 3.6.

The following adverse impacts related to LOS would occur under Alternative 9 TWS DV:

- The intersection of Van Buren Boulevard and the I-215 northbound ramp is projected to operate at LOS E during p.m. peak hours in 2035. No feasible measures have been identified to reduce this impact of Alternative 9 TWS DV to a level below significance.
- The I-15 mainline from Ontario Avenue to SR-91, including the I-15/SR-91 interchange, is also expected to experience traffic congestion under all the MCP Build Alternatives. Although no improvements are proposed by the MCP project in this area, traffic added by the project will contribute to LOS F conditions on this segment of I-15.

Mitigation is required to address impacts to the I-15 mainline. Mitigation Measure TR-1 requires RCTC to conduct a study to determine the most beneficial and cost-effective transportation improvements that will mitigate the traffic impacts of the MCP project on I-15 and on the I-15/SR-91 interchange. However, even with implementation of Mitigation Measure TR-1, impacts to the I-15 mainline may not be reduced to a level of less than significant; therefore, impacts to LOS standards are significant and unavoidable.

#### **4.2.4.7 Mandatory Findings of Significance (CEQA Checklist Questions XVII.b and XVII.c)**

Alternative 9 TWS DV and the other MCP Build Alternatives, when combined with other cumulative projects, would contribute to a cumulative loss of farmlands, visual/aesthetics, cultural resources, paleontological resources, natural communities, wetlands and other waters, plant species, animal species, and threatened and endangered species. Anticipated cumulative impacts include the permanent loss of farmlands, the loss of significant cultural resources, and the continued destruction and recovery of paleontological resources as a result of excavation associated with construction of the MCP and other future land development and infrastructure projects.

Alternative 9 TWS DV and the other MCP Build Alternatives have the potential to result in substantial adverse effects on human beings, particularly as a result of significant unavoidable long-term noise impacts. Alternative 9 TWS DV and the other MCP Build Alternatives would also result in significant unavoidable adverse impacts related to aesthetics, hydrology, and traffic. While not specifically affecting humans, these impacts would change the environment, which could be perceived by some humans as a substantial adverse impact on humans.

#### **4.2.5 Significant Irreversible Environmental Changes**

Section 3.23 (Relationship between Local Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity) and Section 3.24 (Irreversible and Irrecoverable Commitments of Resources that would be Involved in the Proposed Project) describe the potential long-term commitments of resources if an MCP Build Alternative is implemented. The construction of Alternative 9 TWS DV or the other MCP Build Alternatives would result in long-term and permanent commitments of natural, physical, human, and fiscal resources to the project. Land acquired for the project would be permanently committed to transportation use and would no longer be available for reserve, agricultural, residential, commercial, or other uses. Other permanent environmental changes associated with Alternative 9 TWS DV and the other MCP Build Alternatives include increased noise levels, increased nighttime lighting, altered viewsheds, changes in community cohesion, the removal of residential and nonresidential uses, and the loss of archaeological site values.

#### **4.2.6 Climate Change/Global Warming**

##### **4.2.6.1 Affected Environment**

Global warming is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose  $0.6 \pm 0.2$  °Celsius (°C) ( $1.1 \pm 0.4$ °Fahrenheit [°F]) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities.<sup>1</sup> The increased amounts of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases (GHGs) are the primary causes of the human-induced component of warming. They are released

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<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC), Climate Change 2001: The Scientific Basis, [http://www.grida.no/climate/ipcc\\_tar/wg1/index.htm](http://www.grida.no/climate/ipcc_tar/wg1/index.htm).

by the burning of fossil fuels, land clearing, and agriculture, etc. and lead to an increase in the greenhouse effect.

GHGs are present in the atmosphere naturally, released by natural sources, or formed from secondary reactions taking place in the atmosphere. They include CO<sub>2</sub>, methane, nitrogen dioxide (NO<sub>2</sub>), and ozone (O<sub>3</sub>). In the last approximately 200 years, mankind has been releasing substantial quantities of GHGs into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, enhancing the natural greenhouse effect, which is believed to be causing global warming. While man-made greenhouse gases include CO<sub>2</sub>, methane, and NO<sub>2</sub>, some gases, like chlorofluorocarbons (CFCs), are relatively new to the atmosphere.

Natural sources of CO<sub>2</sub> include the respiration (breathing) of animals and plants and evaporation from the oceans. Together, these natural sources release about 136 billion tonnes (150 billion tons) of CO<sub>2</sub> each year, far outweighing the 6 billion tonnes (7 billion tons) of man-made emissions from fossil fuel burning, waste incineration, deforestation, and cement manufacture. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO<sub>2</sub>; consequently, the gas is building up in the atmosphere.

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Man-made sources include the mining and burning of fossil fuels, digestive processes in ruminant animals such as cattle, rice paddies, and the burying of waste in landfills. Total annual emissions of methane are about 453 million tonnes (500 million tons), with man-made emissions accounting for the majority. As with CO<sub>2</sub>, the major removal process of atmospheric methane—chemical breakdown in the atmosphere—cannot keep pace with source emissions, and methane concentrations in the atmosphere are increasing.

California is a substantial contributor of global GHGs, emitting over 362 million tonnes (400 million tons) of CO<sub>2</sub> per year.<sup>1</sup> Climate studies indicate that California is likely to see an increase of 1.7 to 2.2°C (3 to 4°F) over the next century. Because primary GHGs have a long lifetime in the atmosphere, accumulate over time, and are

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<sup>1</sup> California Energy Commission, *Inventory of California GHG Emissions and Sinks: 1990 to 2004*, 2006. [http://www.energy.ca.gov/global\\_climate\\_change/inventory/documents/index.html](http://www.energy.ca.gov/global_climate_change/inventory/documents/index.html).

generally well mixed, their impact on the atmosphere is mostly independent of the point of emission.

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHGs and other gases to the atmosphere from volcanic eruptions); or
- Human activities that change the atmosphere's composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

The impact of anthropogenic activities on global climate change is readily apparent in the observational record. For example, surface temperature data shows that 11 of the 12 years from 1995 to 2006 rank among the 12 warmest since 1850, the beginning of the instrumental record for global surface temperature.<sup>1</sup> In addition, the atmospheric water vapor content has increased since at least the 1980s over land and sea and in the upper atmosphere, consistent with the capacity of warmer air to hold more water vapor; ocean temperatures are warmer to depths of 914 m (3,000 ft); and a marked decline has occurred in mountain glaciers and snow pack in both hemispheres, polar ice, and ice sheets in both the Arctic and Antarctic regions.

Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO<sub>2</sub>, CH<sub>4</sub> (methane), and N<sub>2</sub>O (nitrous oxide) from before the start of industrialization (around 1750) to over 650,000 years ago. For that period, it was found that CO<sub>2</sub> concentrations ranged from 180 parts per million (ppm) to 300 ppm. For the period from around 1750 to the present, global CO<sub>2</sub> concentrations increased from a preindustrialization period concentration of 280 ppm to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the preindustrial period range.

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<sup>1</sup> Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*, February 2007.

The primary effect of global climate change has been a rise in the average global tropospheric temperature of 0.2°C (0.4°F) per decade, determined from meteorological measurements worldwide between 1990 and 2005.<sup>1</sup> Climate change modeling using 2000 emission rates shows that further warming would occur, which would induce further changes in the global climate system during the current century.<sup>2</sup> Changes to the global climate system and ecosystems and to California would include, but would not be limited to:

- The loss of sea ice and mountain snow pack, resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;<sup>3</sup>
- A rise in the global average sea level primarily due to thermal expansion and melting of glaciers and ice caps in the Greenland and Antarctic ice sheets;<sup>4</sup>
- Changes in weather that include widespread changes in precipitation, ocean salinity, and wind patterns, and more energetic and aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;<sup>5</sup>
- A decline in Sierra snowpack, which accounts for approximately half of the surface water storage in California by 70 percent to as much as 90 percent over the next 100 years;<sup>6</sup>
- An increase in the number of days conducive to O<sub>3</sub> formation by 25–85 percent (depending on the future temperature scenario) in high-O<sub>3</sub> areas of Los Angeles and the San Joaquin Valley by the end of the 21st century;<sup>7</sup> and
- High potential for erosion of California's coastlines and seawater intrusion into the delta and levee systems due to the rise in sea level.<sup>1</sup>

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<sup>1</sup> Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*, February 2007.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> California Environmental Protection Agency, *Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature (Executive Summary)*, March 2006.

<sup>7</sup> Ibid.

#### 4.2.6.2 Regulatory Setting

According to a recent white paper by the Association of Environmental Professionals,<sup>2</sup> “...an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. 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 greenhouse gases.”

Caltrans and its parent agency, the California Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation sources, Caltrans has created and is implementing the *Climate Action Program at Caltrans* (Caltrans, December 2006).

One of the main strategies in the *Climate Action Program* to reduce GHG emissions is to make California’s transportation system more efficient. The highest levels of CO<sub>2</sub> from mobile sources, such as automobiles, occur at stop-and-go speeds 0–40 kilometers per hour (kph, 0–25 miles per hour [mph]) and speeds over 88.5 kph (55 mph). Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in GHG emissions.

In 1967, California’s Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus, the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, to establish the ARB. Since its formation, the ARB has worked with the public, the business sector, and local governments to find solutions to California’s air pollution problem. The resulting state air quality standards set by the ARB continue to outpace the rest of the nation and have prompted the development of new antismog technology for industrial facilities and motor vehicles.

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<sup>1</sup> California Environmental Protection Agency, *Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature (Executive Summary)*, March 2006.

<sup>2</sup> Hendrix, Michael, and Wilson, Cori. Recommendations by the Association of Environmental Professionals on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents (AEP, March 5, 2007, p. 2).

California's major initiatives for reducing GHG emissions are outlined in Assembly Bill 32 (AB 32), the "Global Warming Solutions Act," passed by the California state legislature on August 31, 2006; a 2005 Executive Order; and a 2004 ARB regulation to reduce passenger car GHG emissions. These efforts aim at reducing GHG emissions to 1990 levels by 2020, a reduction of approximately 25 percent, and then an 80 percent reduction below 1990 levels by 2050. The main strategies for making these reductions are outlined in the Scoping Plan, which when completed will include a range of GHG reduction actions that can include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050. On January 18, 2007, California further solidified its dedication to reducing GHGs by setting a new Low Carbon Fuel Standard for transportation fuels sold within the state. Executive Order S-1-07 sets a declining standard for GHG emissions measured in CO<sub>2</sub> equivalent gram 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 percent by 2020.

Pursuant to the requirements of AB 32, the state's reduction in global warming emissions will be accomplished through an enforceable statewide cap on global warming emissions that will be phased in starting in 2012. AB 32 required ARB to identify a list of "discrete early action greenhouse gas reduction measures" by June 30, 2007 (Health and Safety Code section 38560(a)). Once on the list, these measures are to be developed into regulatory proposals, adopted by the Board, and made enforceable by January 1, 2010. Additional early action items include a comprehensive framework of regulatory and nonregulatory elements that will result in significant and effective GHG emission reductions. ARB must prepare a plan demonstrating how the 2020 deadline can be met by January 1, 2009, or earlier. However, as immediate progress in reducing GHGs can and should be made, AB 32 directed ARB and the newly created Climate Action Team (CAT) to identify a list of "discrete early action GHG reduction measures" that can be adopted and made enforceable by January 1, 2010. CAT is a consortium of representatives from state

agencies who have been charged with coordinating and implementing GHG emission reduction programs that fall outside of ARB's jurisdiction.

To address GHG emission and global climate change in General Plans and CEQA documents, Senate Bill 97 (Chapter 185, 2007) requires the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines on how to address global warming emissions and mitigate project-specific GHGs. OPR is required to prepare, develop, and transmit these guidelines on or before July 1, 2009. In the interim, OPR in conjunction with ARB has published a *CEQA and Climate Change Technical Advisory* (June 19, 2008) outlining a recommended approach for evaluating climate change in CEQA documents. The primary requirements of the OPR approach are to conduct a good-faith effort to calculate a proposed project's GHG emissions, determine significance, and mitigate any impacts to the extent feasible. The MCP project's GHG analysis adheres to the OPR recommended approach.

In a response to the transportation sector accounting for more than half of California's CO<sub>2</sub> emissions, Assembly Bill 1493 (AB 1493, Pavley) was enacted on July 22, 2002. AB 1493 requires ARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined to be vehicles whose primary use is noncommercial personal transportation in the state and that were manufactured in 2009 and all subsequent model years. In setting these standards, the ARB considered cost effectiveness, technological feasibility, and economic impacts. The ARB adopted the standards in September 2004. When fully phased in, the near-term (2009 to 2012) standards would result in a reduction of approximately 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the midterm (2013 to 2016) standards would result in a reduction of approximately 30 percent. Some currently used technologies that achieve GHG reductions include small engines with superchargers, continuously variable transmissions, and hybrid electric drive. To set its own GHG emissions limits on motor vehicles, California must receive a waiver from the EPA. The EPA denied the waiver in December 2007. In January 2008, the California Attorney General filed a petition for review of the EPA's decision in the Ninth Circuit Court of Appeals, although no decision on that petition has been made. Thus, California cannot enforce AB 1493 at this time.

Climate change and GHG reduction are also concerns at the federal level. However, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change at the federal level.

#### **4.2.6.3 Impacts**

##### ***Long-term Emissions***

The purpose of Alternative 9 TWS DV and the other MCP Build Alternatives is to alleviate existing and future traffic congestion during peak hours. The MCP project will not generate new vehicular traffic trips since it will not construct new homes or businesses. However, there is a possibility that some traffic currently utilizing other routes would be attracted to use the MCP facility, thus resulting in slight increases in vehicle miles traveled (VMT). The impact of GHG emissions is a global rather than a local issue. Therefore, the impact of the MCP Build Alternatives on GHG emissions was calculated using traffic data for the Southern California Association of Governments (SCAG) region. As shown in Tables 4.2.D and 4.2.E, when compared to the 2035 No Build conditions, Alternative 9 TWS DV and the other MCP Build Alternatives would not substantially change the regional VMT or regional vehicle hours traveled (VHT). The VMT and VHT data listed in Tables 4.2.D and 4.2.E were used to calculate the CO<sub>2</sub> and CH<sub>4</sub> emissions for each of the project alternatives. The results of the modeling were used to calculate the CO<sub>2</sub> equivalent (CO<sub>2eq</sub>) emissions listed in Table 4.2.F. As shown in Table 4.2.F, the proposed project alternatives would not significantly change the CO<sub>2eq</sub> emissions within the SCAG region. Therefore, Alternative 9 TWS DV and the other MCP Build Alternatives would not contribute significantly to global warming.

RCTC is supporting efforts to reduce VMT traveled by supporting the planning and implementation of smart land use strategies by jurisdictions with local planning authority. These strategies include job/housing proximity, developing transit-oriented communities, and developing high density housing along transit corridors. RCTC is working closely with local jurisdictions on planning activities; however, RCTC does not have local land use planning authority. RCTC is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks. However, it is important to note that the control of the fuel economy standards is under the jurisdiction of the EPA and ARB.

**Table 4.2.D Vehicle Miles Traveled within the SCAG Region**

Alternative	Auto VMT	Truck VMT	Total VMT
Existing	349,700,131	26,674,632	376,374,763
2035 No Build	469,600,758	42,766,169	512,366,927
Alternative 4	469,861,870	42,763,307	512,625,177
Alternative 5	469,787,688	42,745,590	512,533,278
Alternative 6	469,738,281	42,752,772	512,491,053
Alternative 7	469,766,224	42,748,466	512,514,690
Alternative 9	469,757,587	42,760,335	512,517,921

Source: *Air Quality Analysis*, LSA Associates, Inc., 2008.  
 SCAG = Southern California Association of Governments  
 VMT = vehicle miles traveled

**Table 4.2.E Vehicle Hours Traveled within the SCAG Region**

Alternative	Auto VHT	Truck VHT	Total VHT	Avg. Speed
Existing	9,878,258	599,074	10,477,332	35.92
2035 No Build	13,391,871	950,592	14,342,464	35.72
Alternative 4	13,392,954	951,183	14,344,138	35.74
Alternative 5	13,399,888	852,002	14,351,890	35.71
Alternative 6	13,387,086	951,426	14,338,512	35.74
Alternative 7	13,396,197	951,441	14,347,638	35.72
Alternative 9	13,387,721	951,196	14,338,917	35.74

Source: *Air Quality Analysis*, LSA Associates, Inc., 2008.  
 SCAG = Southern California Association of Governments  
 VHT = vehicle hours traveled

**Table 4.2.F CO<sub>2eq</sub> Emissions within the SCAG Region**

Alternative	Daily CO <sub>2eq</sub> Emissions (lbs/day)	Increase from No Build (lbs/day)	Percent Increase from No Build
2035 No Build	480,544,751	-	-
2035 Alternative 4	480,669,365	124,615	0.026
2035 Alternative 5	480,801,678	256,928	0.053
2035 Alternative 6	480,503,932	-40,819	-0.008
2035 Alternative 7	480,705,298	160,548	0.033
2035 Alternative 9	480,521,777	-22,974	-0.005

CO<sub>2eq</sub> = carbon dioxide equivalent  
 lbs/day = pounds per day  
 SCAG = Southern California Association of Governments

### **Short-term Emissions**

Due to a lack of construction phasing and equipment information, it is not possible to estimate the GHG emissions that would be generated by the materials and equipment needed to complete Alternative 9 TWS DV and the other MCP Build Alternatives. However, when compared to the No Build Alternatives, the construction emissions from each of the MCP Build Alternatives would result in a significant increase in GHG emissions. Therefore, mitigation measures would be required. Implementation of Mitigation Measures AQ-4 through AQ-8, AQ-11, and AQ-12 would reduce the construction GHG emissions. However, the impact would remain significant and unavoidable.

### **4.3 Energy Conservation (CEQA Guidelines, Appendix F)**

The CEQA Guidelines, Appendix F, Energy Conservation, state that EIRs are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

The following items required for an energy analysis per the CEQA Guidelines are summarized below, with references to where information can be found in this EIR/EIS:

- a) **Project Description:** The energy analysis in Section 3.16 includes an analysis of the energy consumed by the on-road vehicles for each of the MCP Build Alternatives and a discussion of temporary energy needs for construction operations.
- b) **Environmental Setting:** The energy analysis in Section 3.16 includes a description of the fuel and natural gas currently consumed within the SCAG region.
- c) **Environmental Impacts:** The energy analysis in Section 3.16 evaluates potential impacts associated with short-term construction and long-term operational energy consumption.
- d) **Mitigation Measures:** The MCP project would result in a nominal (maximum of 0.03 percent) annual increase in regional energy consumption compared to the No Build Alternatives due to project operation as a result of increased VMT. Mitigation Measures AQ-1 through AQ-8, AQ-11, and AQ-12 (which are discussed in Section 3.14) will reduce impacts related to energy consumption.
- e) **Alternatives:** The energy analysis in Section 3.16 evaluates the long-term energy consumption needs of each of the proposed MCP Build Alternatives.

- f) **Unavoidable Adverse Effects:** Implementation of the MCP project would result in an unavoidable adverse effect of an annual increase of 0.03 percent in regional energy consumption.
- g) **Irreversible Commitment of Resources:** Implementation of the MCP project would not commit any future resources that would preempt future energy development or future energy conservation.
- h) **Short-term Gains versus Long-term Impacts:** As discussed in Section 3.16, the MCP project would result in a nominal increase in long-term energy consumption.
- i) **Growth-Inducing Effects:** The purpose of the proposed project is to accommodate planned growth in western Riverside County. The MCP project would not generate any new vehicle trips.

#### **4.4 Mitigation Measures for Significant Impacts Under CEQA**

As discussed above, a number of avoidance, minimization, and mitigation measures were developed to address the adverse impacts of the Locally Preferred Alternative (Alternative 9 TWS DV) and the other MCP Build Alternatives that can be reduced below a level of significant with mitigation and those that will still be significant and unavoidable after mitigation. Appendix F provides the complete language of each avoidance, minimization, and mitigation measure applicable to Alternative 9 TWS DV and the other MCP Build Alternatives, and provides the environmental mitigation measures that will be adopted by RCTC when it certifies the Final EIR. Those measures are listed below by environmental topic.

- Aesthetics: Mitigation Measures VIS-1 through VIS-8
- Agricultural Resources: Mitigation Measures AG-1 through AG-4
- Air Quality: Mitigation Measures SC-1 through SC-14 and AQ-1 through AQ-13
- Biological Resources: Mitigation Measures Habitat Conservation Plan-1 through Habitat Conservation Plan-3, BIO-1 through BIO-3, WET-1 through WET-4, PS-1, AS-1 through AS-4, and TE-1 through TE-3
- Cultural Resources: AR-1 and PAL-1
- Energy/Climate Change/Global Warming: AQ-1 through AQ-8, AQ-11, and AQ-12
- Geology and Soils: Mitigation Measures GEO-1 through GEO-4
- Hazards and Hazardous Materials: Mitigation Measures HW-1 through HW-10
- Hydrology and Water Quality: Mitigation Measures WQ-1 through WQ-4
- Land Use and Planning: Mitigation Measures LU-1 through LU-4

- Noise: Caltrans Standard Conditions and reasonable and feasible soundwalls
- Transportation/Traffic: Mitigation Measures TR-1 through TR-3
- Utilities and Service Systems: Mitigation Measures US&E-1 through US&E-10

## 4.5 Environmentally Superior Alternative

For the MCP project, No Build Alternative 1A (the “no project” alternative under CEQA) is the environmentally superior alternative. Alternative 1A does not meet the project objectives, as follows:

1. Alternative 1A would not effectively and efficiently accommodate regional west-east movement of people and goods between and through Corona, Perris, and San Jacinto. As documented in Section 1.2.2.1 of this EIR/EIS, travel times between I-15 in Corona and SR-79 in San Jacinto would be almost three times longer under Alternative 1A (approximately 90 minutes) than with the MCP Build Alternatives (approximately 30 minutes).
2. Alternative 1A would not provide increased capacity to support the forecast travel demand for the 2035 design year. As documented in Table 1.2.A of this EIR/EIS, Cajalco Road and Ramona Expressway would operate at LOS F under Alternative 1A.
3. Alternative 1A would not provide a limited access parkway. As documented in Section 1.2.2.2 of this EIR/EIS, Alternative 1A would not limit access to Cajalco Road and Ramona Expressway, which would impede traffic flow.
4. Alternative 1A would not provide roadway geometrics to meet State highway design standards. As documented in Section 1.2.2.2 of this EIR/EIS, Alternative 1A would not meet State highway design standards.
5. Alternative 1A would not accommodate STAA National Network trucks. As documented in Section 1.2.2.2 of this EIR/EIS, Alternative 1A would not meet State highway design standards and therefore would not be able to accommodate STAA National Network trucks.
6. While Alternative 1A would not be incompatible with a future multimodal transportation system, it would not provide the improved mobility that will enable commuters to better access the future Perris Valley Line (PVL) commuter rail project and Perris Multimodal Facility.

While Alternative 1A would not meet the project objectives, it would also not result in most of the significant adverse environmental impacts discussed in Chapter 3 and

Section 4.2 above. However, as documented in Section 3.6 of this EIR/EIS, Alternative 1A would result in traffic LOS that do not meet local or State standards.

Section 15126.6(e)(2) of the CEQA Guidelines requires that, when the “no project” alternative is the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. As described in detail in Section 2.8 of this EIR/EIS, because it is the least impacting alternative to the human and natural environment, Alternative 9 TWS DV has been identified as the Locally Preferred Alternative. Alternative 9 TWS DV is also considered the environmentally superior alternative under CEQA. The basis for this conclusion is that Alternative 9 TWS DV is the least damaging to water resources and aquatic ecosystems, wildlife threatened and endangered species, and existing reserve lands (and completely avoids the Metropolitan Water District of Southern California [Metropolitan] MSHCP reserve area), and avoids a potential Native American sacred site. Alternative 9 TWS DV is the least impacting to existing business and residential access and travel patterns, impacts the least acreage of farmland, and requires the least number of residential and business relocations. Alternative 9 TWS DV does not directly impact any schools and has the lowest direct impacts to low-income/minority populations. Alternative 9 TWS DV will have the least impact to noise-sensitive land uses and will require the fewest sound barriers.

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