

**CALIFORNIA ENVIRONMENTAL QUALITY ACT
CHECKLIST AND ANALYSIS**

for

**Total Maximum Daily Loads for Sediment Toxicity and
Pyrethroids Pesticides in Sediment in the Lower
Salinas River Watershed in Monterey County,
California**

**Central Coast Regional
Water Quality Control Board**

Prepared under the California Environmental Quality Act
Requirements of a Certified Regulatory Program

***Prepared January 2016
(Draft)***

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1. INTRODUCTION AND PROJECT DESCRIPTION

The Central Coast Regional Water Quality Control Board, Region (Central Coast Water Board) is required to develop and adopt total maximum daily loads (TMDLs) and associated implementation plans for surface waters that are not achieving water quality standards (40 CFR 130.6(c)(1), 130.7, California Water Code section 13242). TMDLs are the maximum amount of pollutants that a waterbody can receive and still achieve water quality standards. Several waterbodies in the lower Salinas River watershed are not achieving water quality standards due to sediment toxicity and pyrethroid pesticides and the Central Coast Water Board proposes an amendment to the Water Quality Control Plan for the Central Coastal Region (Basin Plan) to incorporate the TMDLs for Sediment Toxicity and Pyrethroid Pesticides in Sediment in the Lower Salinas River Watershed (also referred to as the TMDL). For the TMDL, the Central Coast Water Board is the Lead Agency under the California Environmental Quality Act (CEQA) for evaluating the environmental impacts of the proposed amendment to the Basin Plan.

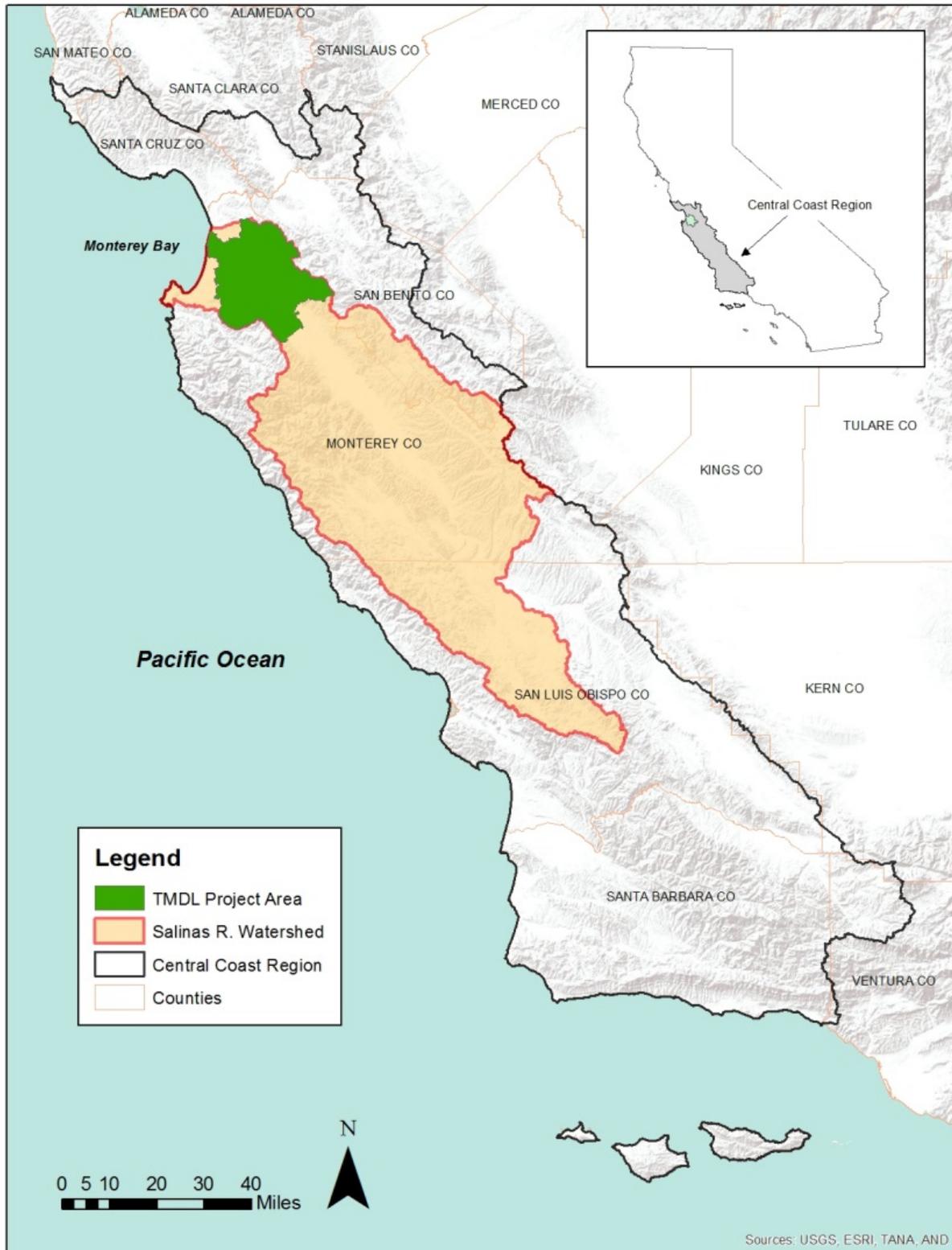


Figure 1. Location map of the Central Coast Region, the Salinas River watershed, and the TMDL project area/lower Salinas River watershed.

Pursuant to Public Resources Code section 21080.5, the Natural Resources Agency has approved the Central Coast Water Board's basin planning process as a "certified regulatory program" that adequately satisfies the CEQA (Public Resources Code, Section 21000 et seq.) requirements for preparing standard environmental documents (14 Cal. Code Regs. §15251(g); 23 Cal. Code Regs. § 3782.). The Central Coast Water Board was certified because its basin planning process is designed to protect the environment and ensure public participation. The basin planning processes is not exempt from the CEQA substantive content requirements and staff has prepared a substitute environmental documentation (SED) for this project that contains the required environmental documentation as set forth in the State Water Resource Control Board's (State Water Board) CEQA regulations (23 Cal. Code Regs. § 3777.). The SED includes this CEQA Checklist and Analysis along with the TMDL Staff Report and its attachments.

This CEQA Checklist and Analysis evaluates environmental impacts that may occur from reasonably foreseeable methods of implementing the TMDL.

The SED will be considered for approval by the Central Coast Water Board when it considers adoption of the TMDLs. Approval of the SED includes the process of: (1) addressing comments, (2) confirming that the Central Coast Water Board considered the information in the SED, and (3) affirming that the SED reflects independent judgment and analysis by the Central Coast Water Board (Section 15090 of CEQA Guidelines [Title 14 of California Code of Regulations]).

The TMDL area is the lower Salinas River watershed (refer to Figure 2), which encompasses an area of approximately 405 square miles in northern Monterey County. It extends from approximately the City of Gonzales north to Monterey Bay and the Pacific Ocean. There are two major drainages in the project area, one is the lower Salinas River and the other is the Reclamation Canal. The lower Salinas River watershed is a subwatershed in the lower portion of the Salinas River watershed (refer to Figure 1).

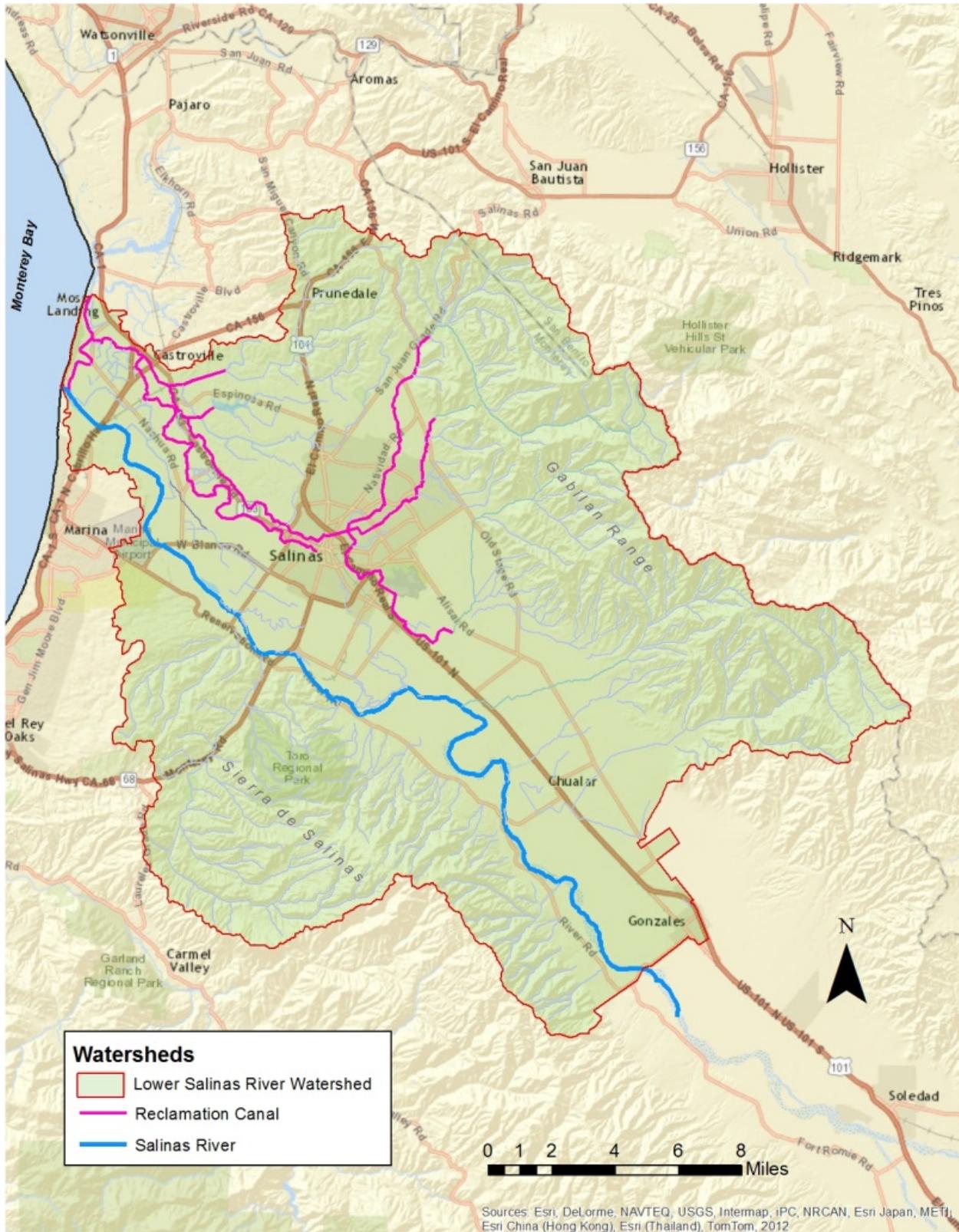


Figure 2. TMDL Area and Watersheds

The TMDL addresses surface waters in the lower Salinas River watershed that are impaired for sediment toxicity and pyrethroid pesticides based on exceedance of general narrative objectives in the Basin Plan. The TMDL includes numeric targets and allocations for dischargers aimed at achieving the general objectives and protection of beneficial uses of water. The general objectives are:

General Objective for Toxicity: All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with the objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods.

General Objective for Pesticides: No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

The goal of the TMDL is to restore and protect beneficial uses, which are described in the Basin Plan along with water quality objectives. Waterbodies can be assigned specific beneficial uses in the Basin Plan or be designated ones. Designated beneficial uses of waterbodies impaired in the lower Salinas River watershed include:

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Ground Water Recharge (GWR)
- Water Contact Recreation (REC-1)
- Non-Contact Water Recreation (REC-2)
- Wildlife Habitat (WILD)
- Cold Fresh Water Habitat (COLD)
- Warm Fresh Water Habitat (WARM)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Rare, Threatened, or Endangered Species (RARE)
- Estuarine Habitat (EST)
- Freshwater Replenishment (FRESH)
- Commercial and Sport Fishing (COMM)
- Shellfish Harvesting (SHELL)

Waterbodies without specific designated beneficial uses in the Basin Plan are assigned Municipal and Domestic Water Supply beneficial uses and protection of both recreation and aquatic life.

The Central Coast Water Board is required to adopt TMDLs and implementation plans (40 CFR 130.6(c)(1), 130.7, California Water Code section 13242) to address impaired waters listed on the Clean Water Act Section 303(d) list of impaired waters (303(d) list). Waterbodies in the lower Salinas River watershed were identified on the 303(d) list as impaired for sediment toxicity (refer to Table 1). During development of the TMDLs, additional impairments were identified for sediment toxicity and pyrethroids that are included in the project.

Table 1. Waterbodies identified as impaired for sediment toxicity and pyrethroid pesticides

Waterbody	303(d) Listed Pollutant	Additional Impairments¹
Alisal Creek	--	Sediment Toxicity, Pyrethroids
Alisal Slough	Sediment Toxicity	--
Blanco Drain	--	Sediment Toxicity
Espinosa Slough	Sediment Toxicity	--
Gabilan Creek	Sediment Toxicity	--
Merrit Ditch	Sediment Toxicity	
Natividad Creek	Sediment Toxicity	--
Old Salinas River	Sediment Toxicity	--
Quail Creek	Sediment Toxicity	--
Salinas Reclamation Canal	Sediment Toxicity	Pyrethroids
Salinas River (lower)	--	Sediment Toxicity, Pyrethroids
Tembladero Slough	Sediment Toxicity	Pyrethroids

¹ Additional impairments are exceedances of water quality objectives in waterbodies identified during TMDL development and subsequent to the most recent 2010 303(d) listing cycle.

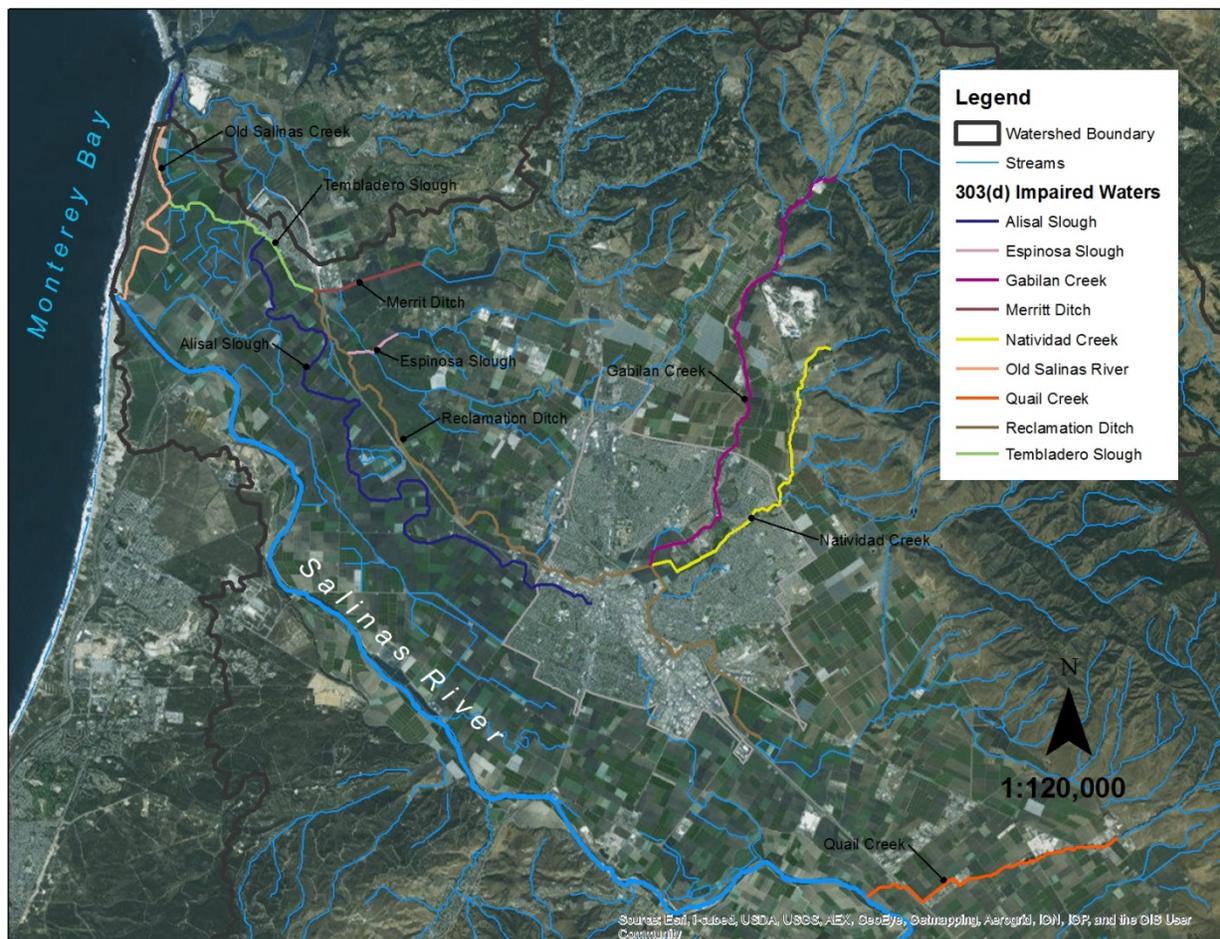


Figure 3. Map of impaired waters in the lower Salinas River watershed

The TMDL includes an analysis of pollution sources in the lower Salinas River watershed and pyrethroids were found to be a major source of sediment toxicity. Pyrethroids are pesticides applied to control agricultural and non-agricultural insect pests. Pyrethroid pesticides are commonly applied to the major agricultural crops grown in the Salinas Valley such as strawberries, lettuce, artichokes, cauliflower, and broccoli. In urban areas pyrethroids are commercially applied for structural and landscape pest control. They are also readily available consumer home and garden insecticides. About 30% of the land use in the lower Salinas River watershed is cropland and 17% is urban. Pyrethroid pesticides bind to sediment and are relatively persistent in the environment. They are transported from urban and agricultural areas bound to sediment.

The TMDL establishes TMDLs for sediment toxicity and pyrethroid pesticides and allocates TMDLs to point and nonpoint sources. The TMDL assigns waste load allocations to point sources (stormwater programs) and load allocations to nonpoint sources (irrigated agricultural operations), and also provides an implementation schedule to achieve the allocations. Waste load allocations will be implemented through the City of Salinas and County of Monterey's Municipal Separate Storm Sewer System (MS4) permits. Load allocations will be implemented through regulatory mechanisms of the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated lands (Agriculture Order).

Pesticide use is also regulated with the intention of protecting water quality by the United States Environmental Protection Agency (USEPA) and the California Department of Pesticide Regulations (DPR). USEPA has authority under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) to assure that pesticides, when used properly, will not harm the environment. USEPA regulates proper use through the pesticide registration and evaluation process, which are implemented through pesticide label use instructions. DPR is the lead agency for regulating the use of pesticides in California and is mandated by state law to protect the environment from the adverse effects of pesticide use. Additionally, DPR and the Water Boards have signed a Management Agency Agreement to address pesticide water quality problems using an approach described in the California Pesticide Management Plan for Water Quality (California Pesticide Plan) developed by the agencies. DPR is a state regulatory agency and DPR regulations and the Management Agency Agreement are implemented at the local level by the Monterey County Agricultural Commissioner. These efforts, as well as requirements described in municipal stormwater permits and the Agriculture Order will be used to implement the TMDL.

In addition to assigning load allocations, the TMDL establishes an estimated time schedule and milestones for achieving the TMDLs and targets. The estimated date to achieve the TMDLs after approval of the TMDL by the Office of Administrative Law is five years for urban sources and eight to ten years for agricultural sources. The estimated date to achieve the watershed receiving water targets is twelve to fifteen years after approval of the TMDL by the Office of Administrative Law.

2. REGULATORY REQUIREMENTS FOR ENVIRONMENTAL IMPACT ANALYSIS

This section presents the regulatory requirements for assessing environmental impacts of a TMDL implemented through a Basin Plan amendment by the Central Coast Water Board. The TMDL is evaluated at a program level of detail under a certified regulatory program and the information and analyses are presented in the SED, including this CEQA Checklist and Analysis.

The TMDL Staff Report and its attachments, including this CEQA Checklist and Analysis, together with responses to comments and the resolution approving the amendment, fulfill the requirements of California Code of Regulations section 3777, subdivision (a), and the Central Coast Water Board's substantive CEQA obligations. In preparing these CEQA substitute documents, the Central Coast Water Board considered the requirements of Public Resources Code section 21159 and California Code of Regulations, title 14, section 15187, and intends these documents to serve as a tier-one environmental review.

Any potential environmental impacts associated with implementation of the TMDL depends upon the specific compliance projects selected by the responsible parties, some of whom are public agencies subject to their own CEQA obligations (See Pub. Res. Code § 21159.2). There could be adverse environmental impacts if the responsible parties do not properly mitigate the effects at the project level. The SED identifies mitigation measures that could be considered at the project level. The mitigation measures were developed with input from stakeholders and from review of published research and industry practices. Consistent with CEQA, the SED does not engage in speculation or conjecture but rather considers the reasonably foreseeable

feasible mitigation measures, and the reasonably foreseeable alternative means of compliance, which would avoid, eliminate, or reduce the identified impacts.

a. Exemption from Certain CEQA Requirements

The California Secretary of Resources has certified the State and Regional Water Boards' basin planning process as exempt from certain requirements of CEQA, including preparation of an initial study, negative declaration, and environmental impact report (California Code of Regulations, Title 14, Section 15251(g)). As the proposed amendment to the Basin Plan is part of the basin planning process, the environmental information developed for and included with the amendment can substitute for an initial study, negative declaration, and/or environmental impact report.

b. California Code of Regulations and Resources Code Requirements

While the certified regulatory program of the Central Coast Water Board is exempt from certain CEQA requirements, it is subject to the substantive requirements of California Code of Regulations, Title 23, Section 3777(a), which requires a written report that includes a description of the proposed activity, an analysis of reasonable alternatives, and an identification of mitigation measures to minimize any significant adverse environmental impacts. Section 3777(a) also requires the Central Coast Water Board to complete an environmental checklist as part of its substitute environmental document. This checklist is provided in section 5 of this document.

In addition, the Central Coast Water Board must fulfill substantive obligations when adopting performance standards such as TMDLs, as described in Public Resources Code section 21159. Section 21159, which allows expedited environmental review for mandated projects, provides that an agency shall perform, at the time of the adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, an Environmental Analysis of the reasonably foreseeable methods of compliance. The statute further requires that the environmental analysis at a minimum, include, all of the following:

1. An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.
2. An analysis of reasonably foreseeable feasible mitigation measures to lessen the adverse environmental impacts.
3. An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation that would have less significant adverse impacts. (Pub. Resources Code, § 21159(a).)

Section 21159(c) requires that the Environmental Analysis take into account a reasonable range of:

1. Environmental, economic, and technical factors,
2. Population and geographic areas, and
3. Specific sites.

c. Program and Project Level Analyses

Public Resources Code §21159(d) specifically states that the public agency is not required to conduct a project level analysis. Rather, a project level analysis must be performed by the local agencies that are required to implement the requirements of the TMDL (Pub. Res. Code §21159.2). Notably, the Central Coast Water Board is prohibited from specifying the manner of compliance with its regulations (Water Code §13360), and accordingly, the actual environmental impacts will depend upon the compliance strategy selected by responsible parties.

This CEQA Checklist and Analysis identifies the reasonably foreseeable environmental impacts of the reasonably foreseeable methods of compliance (Pub. Res. Code, §21159(a)(1)), based on information developed before, during, and after the CEQA scoping process that is specified in California Public Resources Code section 21083.9. This analysis is a program level (i.e., macroscopic) analysis. CEQA requires the Central Coast Water Board to conduct a program level analysis of environmental impacts. (Pub. Res. Code, §21159(d).) Similarly, the CEQA Checklist and Analysis does not engage in speculation or conjecture (Pub. Res. Code, §21159(a)). When the CEQA analysis identifies a potentially significant environmental impact, the accompanying analysis identifies reasonably foreseeable feasible mitigation measures (Pub. Res. Code, §21159(a)(2)). Because responsible parties will most likely use a combination of implementation alternatives, the CEQA Checklist and Analysis has identified the reasonably foreseeable alternative means of compliance. (Pub. Res. Code, §21159(a)(3).)

d. Purpose of CEQA

CEQA's basic purposes are to: 1) inform the decision makers and public about the potential significant environmental effects of a proposed project, 2) identify ways that environmental damage may be mitigated, 3) prevent significant, avoidable damage to the environment by requiring changes in projects, through the use of alternative or mitigation measures when feasible, and 4) disclose to the public why an agency approved a project if significant effects are involved. (Cal. Code Regs., tit. 14, §15002(a).)

To fulfill these functions, a CEQA review need not be exhaustive, and CEQA documents need not be perfect. They need only be adequate, complete, and good faith efforts at full disclosure. (Cal. Code Regs., tit.14, §15151.) The Court stated in *River Valley Preservation Project v. Metropolitan Transit Development Board* (1995) 37 Cal.App.4th 154, 178:

“[a]s we have stated previously, “[our] limited function is consistent with the principle that [t]he purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind...” (City of Santee v. County of San Diego (1989) 214 Cal.App.3d 1438, 1448 [263 Cal. Rptr. 340]; quoting Laurel Heights I, supra, 47 Cal.3d at p. 393.) “We look ‘not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.’ (Guidelines, §§ 15151.)” (City of Fremont v. San Francisco Bay Area Rapid Transit Dist., supra, 34 Cal.App.4th at p. 1786.)

Nor does a CEQA require unanimity of opinion among experts. The analysis is satisfactory as long as those opinions are considered.

In this document, Central Coast Water Board staff has performed a good faith effort at full disclosure of the reasonably foreseeable environmental impacts that could be attendant with the proposed TMDLs.

e. Determining Significant Impacts and Thresholds of Significance

A key component of CEQA is determining whether environmental impacts are significant. A significant effect on the environment is defined as a substantial or potentially substantial adverse change in the environment. (Public Resource Code §§ 21068, 21100(d); Cal. Code Regs. tit. 14 § 15382.) To assess the impact of a proposed project on the environment, the lead agency examines the changes to existing environmental conditions that would occur in the affected area if the proposed project were implemented. (Cal. Code Regs. tit. 14 § 15125.2, subd.(a); *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal. App.4th 645.) The basis of determining whether an impact is potentially significant is the comparison of project impacts to thresholds of significance for protecting the resource. Thresholds of significance are quantitative or qualitative analytical criteria used to determine the effects of a project on the environment. The thresholds may vary with the setting of the TMDL and may be developed on the basis of an individual project or the lead agency may have established thresholds. The lead agency can also consider thresholds of significance adopted for other projects or by other agencies (Cal. Code Regs., tit. 14, §15064.7). For this TMDL, Central Coast Water Board staff considered thresholds of significance adopted in other TMDLs, along with ones used by other regulatory programs and public agencies, such as the Monterey County General Plan Draft EIR (Monterey County, 2007).

3. ENVIRONMENTAL SETTING

This section describes the current environmental conditions of the project area, the lower Salinas River watershed. The regional geographic setting is described above in the project description section and the geographic and environmental settings are also more extensively described in the TMDL Technical Project Report. The following are descriptions of the natural and built environments of the lower Salinas River watershed in the context of the TMDL.

Land Use: Cultivated cropland is the predominant land use in the lower Salinas River watershed. Cultivated crops and developed land uses dominate the valley floor of the watershed. The surrounding foothills are much less developed and are covered with forests, grasslands, and native scrub. The largest developed area in the lower Salinas River watershed is the City of Salinas with a population of just over 150,000. Other communities in the lower Salinas River watershed include the City of Gonzales and the unincorporated communities of Castroville, Chualar, and Spreckels with a combined population of over 16,000.

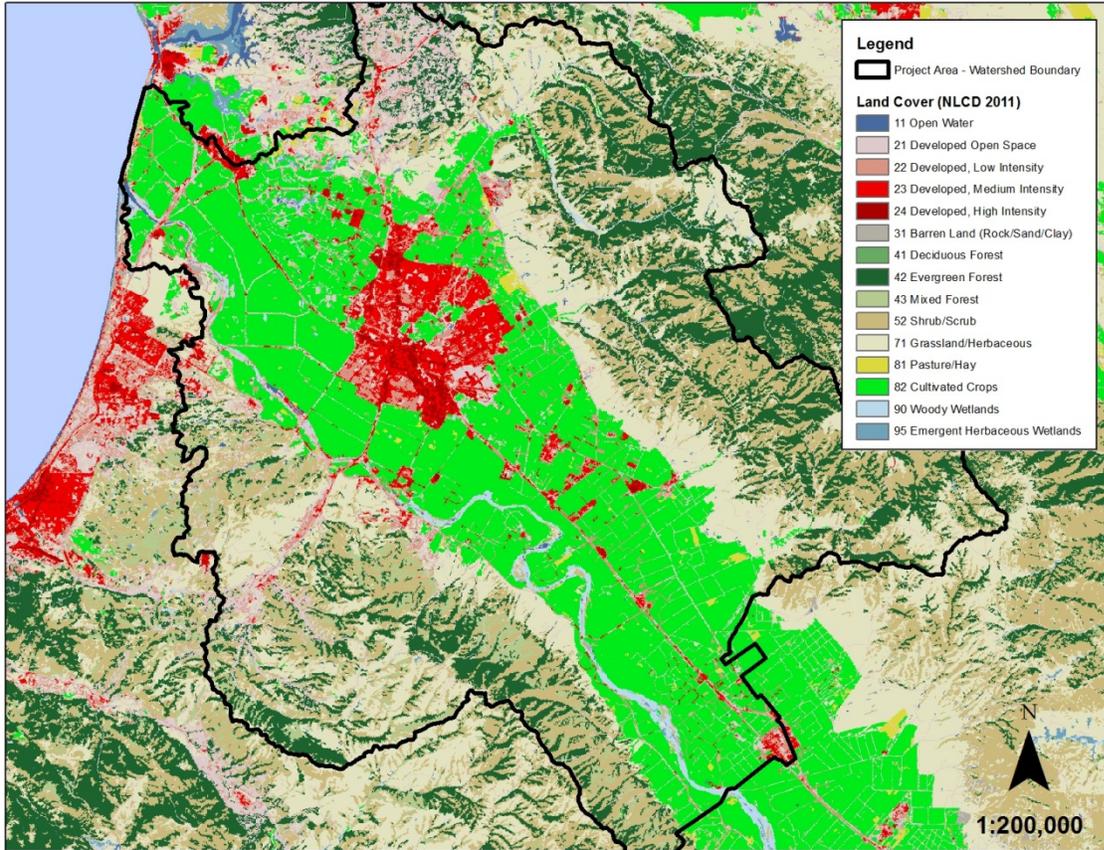


Figure 4. Map of land cover in the lower Salinas River watershed, (Source: National Land Cover Dataset).

Table 2. Land cover acreage and percent cover

Id - Land Cover	Percent	Acres
11 - Open Water	0%	498
21 - Developed Open Space	8%	20502
22 - Developed, Low Intensity	4%	10847
23 - Developed, Medium Intensity	4%	10070
24 - Developed, High Intensity	1%	2038
31 - Barren Land (Rock/Sand/Clay)	0%	591
41 - Deciduous Forest	0%	5
42 - Evergreen Forest	14%	34584
43 - Mixed Forest	3%	7298
52 - Shrub/Scrub	17%	42113
71 - Grassland/Herbaceous	17%	43370
81 - Pasture/Hay	1%	1252
82 - Cultivated Crops	29%	72393
90 - Woody Wetlands	1%	2922
95 - Emergent Herbaceous Wetlands	0%	858
Total	100%	249341

(Source: National Land Cover Dataset).

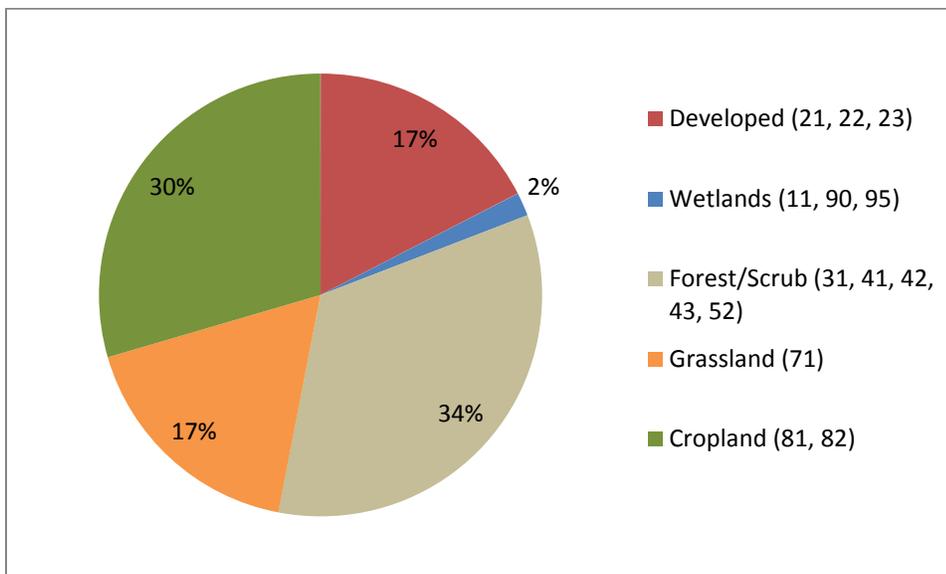


Figure 5. Percent land cover in the watershed and associated land cover Id numbers summarized in land cover type (Source: National Land Cover Dataset).

Agriculture: The lower Salinas River watershed is a very productive agricultural area within Monterey County and the Salinas Valley. The crop production values for the lower Salinas River watershed are not available. However in Monterey County, agricultural production was valued at \$4.38 billion in 2013. The county production values are outlined as follows:

- 65% - \$2,833,755,000 – vegetable crops (lettuce, broccoli, celery, & spinach)
- 26% - \$1,159,589,000 – fruit and nut crops (mostly strawberry and wine grapes)
- 7% - \$312,346,000 – nursery products
- 2% - \$74,012,000 – other (livestock, poultry, apiary, seed & field crops)

Due to the proximity and cool moderating influence of the Pacific Ocean, the climate in the lower Salinas River watershed is very suitable for vegetable and strawberry production. The watershed is at the base of a large alluvial valley and the soils are extremely rich and productive.

The conservation quality and location of agricultural lands is evaluated and mapped by the California Department of Conservation’s Farmland Mapping and Monitoring Program (FMMP). FMMP farmland of the watershed is mapped in Figure 6 with Prime Farmland being the predominant land use for crops.

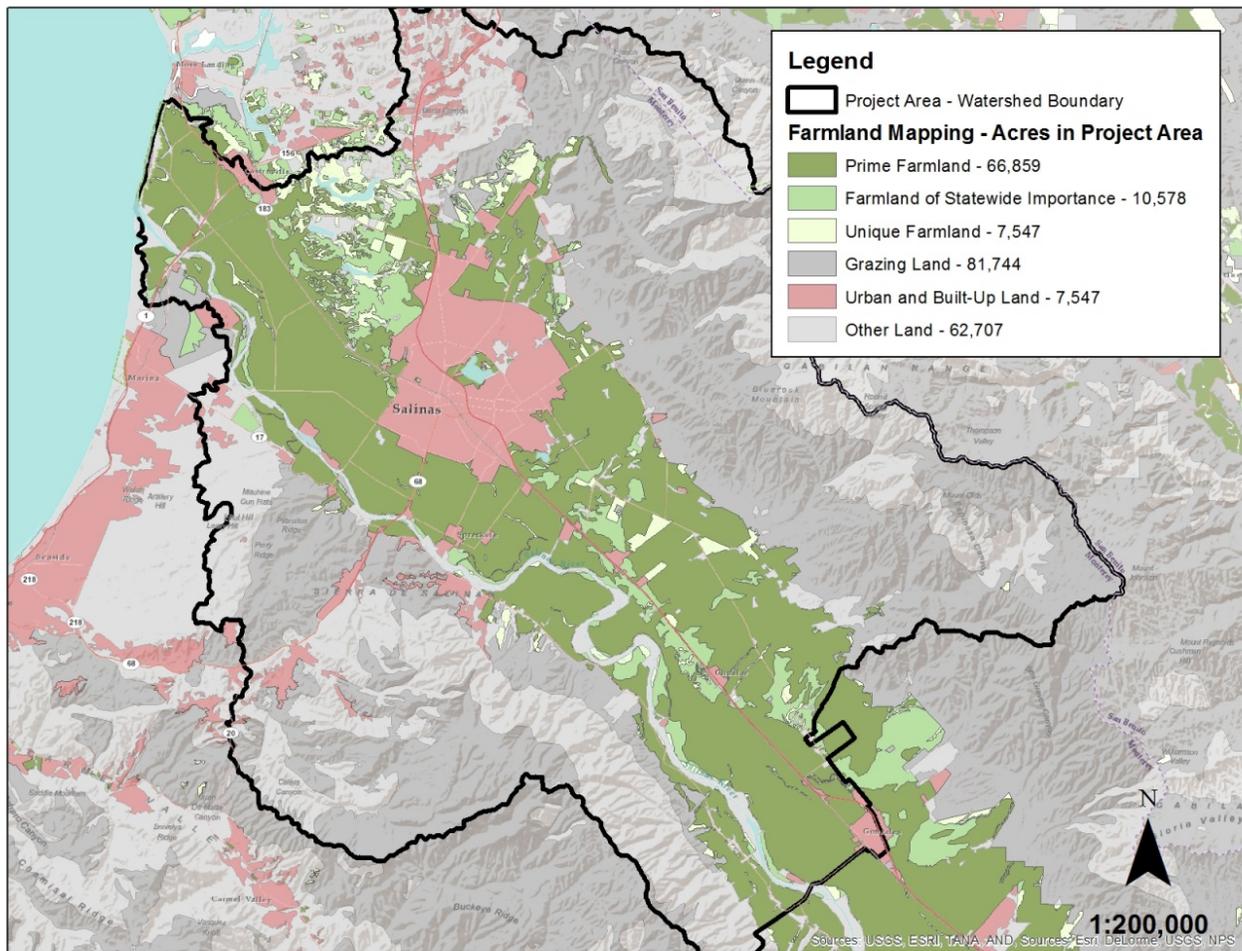


Figure 6. Farmland mapping of the lower Salinas River watershed

Monterey County has an agricultural preserve program that enrolls farmland in Williamson Act contracts. The contracts restrict changes in land use for reduced property tax assessments. Shown on the map in Figure 7 are parcels mapped under Williamson Act contracts and described as prime farmland. Approximately 98,000 acres in the project area are under Williamson Act contract and of these; approximately 31,000 acres intersect with prime farmland. Most of the farmland associated with the TMDL is located on the 66,859 acres of prime farmland and on the 10,578 acres of farmland of statewide importance in the lower Salinas River watershed.

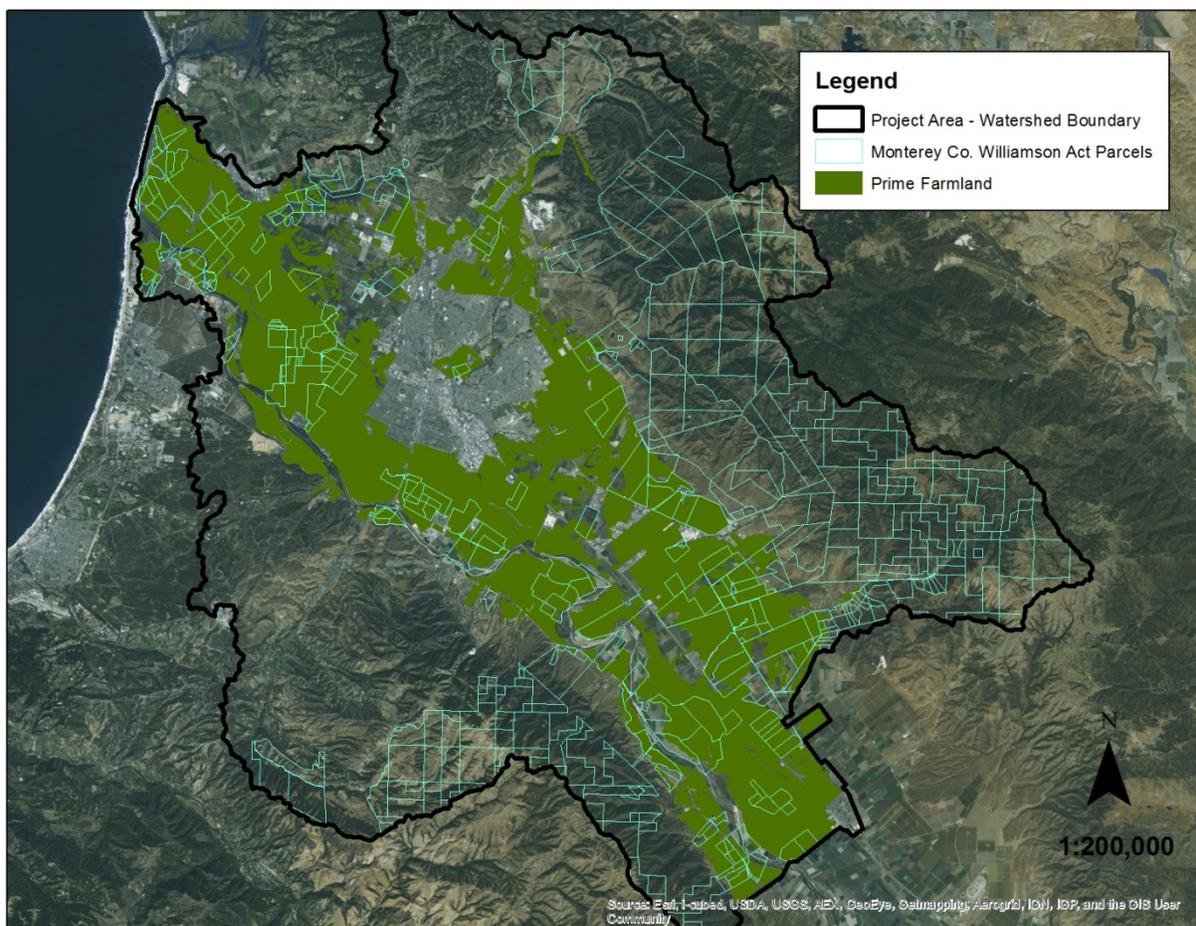


Figure 7. Monterey County Williamson Act parcels and prime farmland in the project area

Soils and Geology: The lower Salinas River watershed lies in a southeast to northwest-trending intermontane trough (lower Salinas's valley) filled principally by unconsolidated alluvial sediments (quaternary alluvium) (refer to Figure 8). The lower Salinas valley is bounded to the northeast by the Gabilan Mountains and to the southwest by the Santa Lucia Mountains, which are formed by uplift and transpressional tectonic forces and which are underlain by consolidated sedimentary assemblages, igneous rocks, and metamorphic rocks. The Salinian and the Franciscan are the major rock types in the mountain ranges. Erosion of the steep mountains surrounding the valley formed broad alluvial fans of nutrient rich soils that support the productive farm land. The valley overlies productive aquifers that provide groundwater for farms and communities in the watershed. The lower end of the watershed along the coast is bound by sand deposits (sand dunes) that separate the Salinas Valley from Monterey Bay.

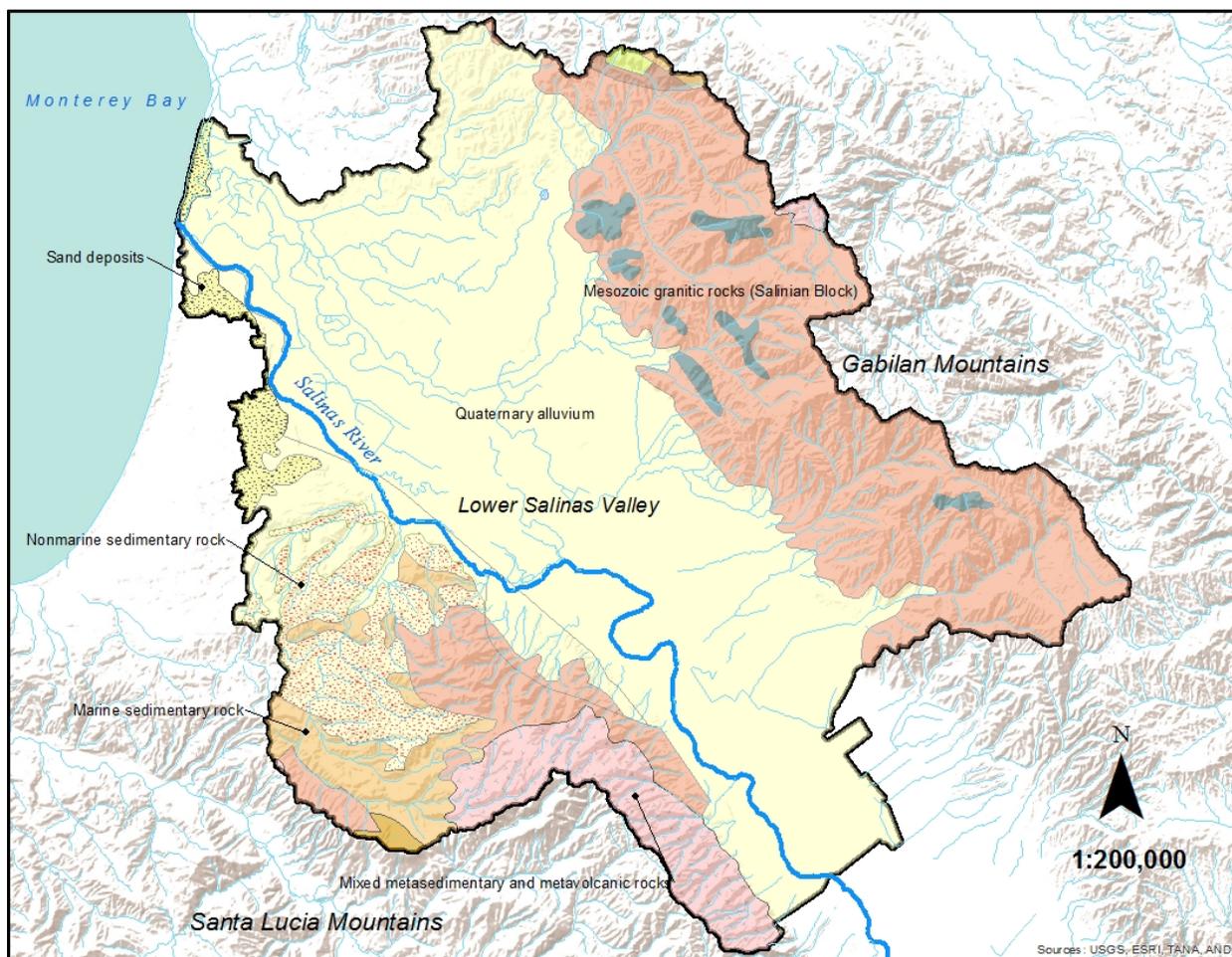


Figure 8. Geology of the lower Salinas River Watershed

Mineral Deposits: Mineral resources in the lower Salinas River watershed were evaluated and there are many abandoned mines in the hills and only a few active sites. In the Gabilan Mountains near Gabilan Creek there is an active dolomitic lime quarry. There are also two sand and gravel operations along the Salinas River channel and one in the Santa Lucia Mountains (refer to Figure 9). There are also three abandoned oil wells. The mine and well sites are located mainly in the foothills around the valley and not in the valley floor near farms or municipalities. Mineral resource zones are classified and mapped according to known or potential presence and value by the State Geologist. The classification is required under the California Surface Mining and Reclamation Act of 1975 and they are classified and mapped into four mineral resources zones (refer to Table 3 and Figure 9).

Table 3. Mineral resource zones

Divisions	Descriptions
MRZ-1	Areas of no mineral resource significance
MRZ-2	Areas of identified mineral resource significance
MRZ-3	Areas of undetermined mineral resource significance
MRZ-4	Areas of unknown mineral resources significance

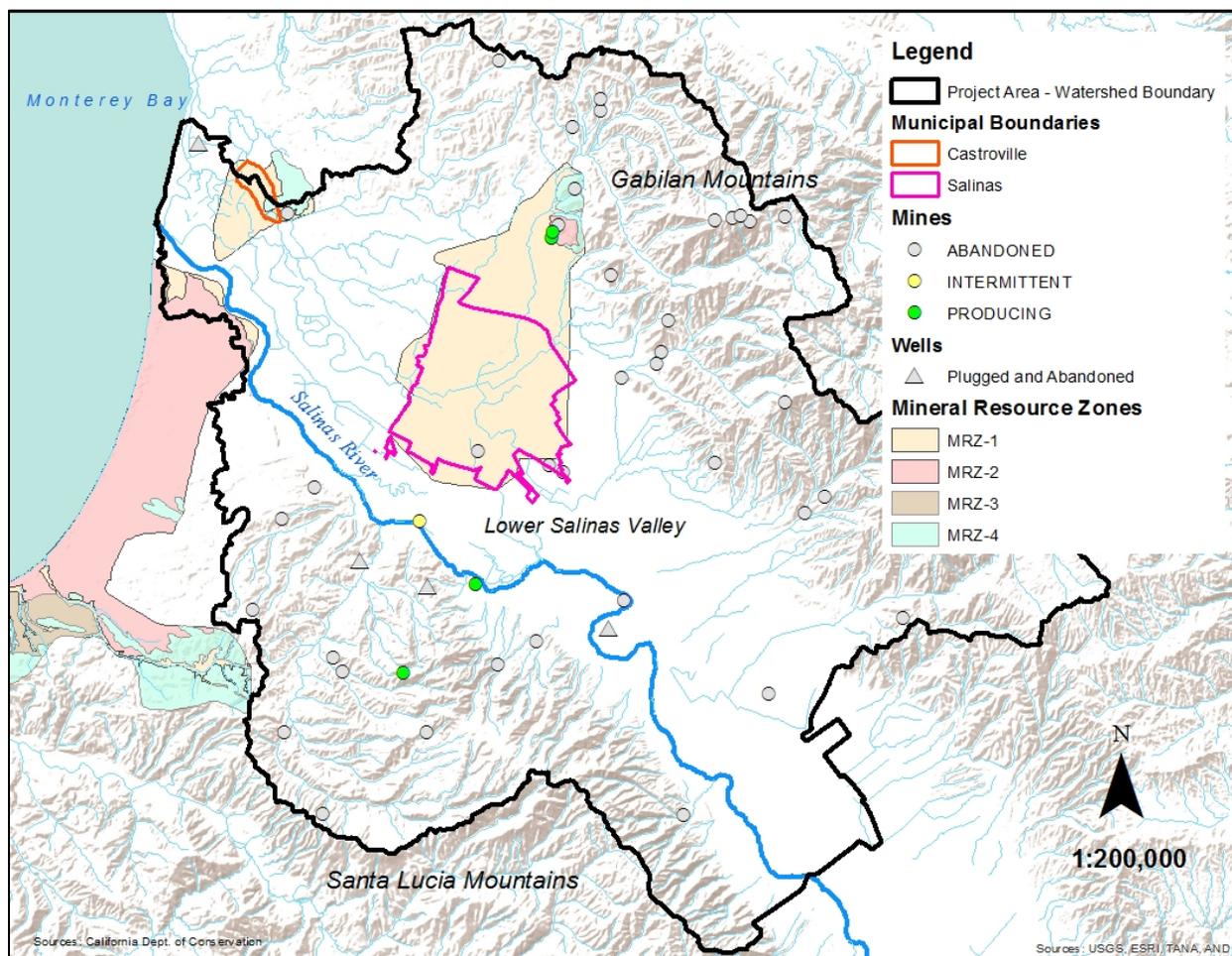


Figure 9. Mineral resources in the lower Salinas River watershed

Biology (vegetation and wildlife): Diverse natural vegetation and wildlife habitats are supported in the lower Salinas River watershed. While the valley floor is mainly developed with irrigated agriculture and urban lands, the Salinas River is an important wildlife and steelhead corridor (refer to Figure 10). The Salinas River is a broad channel that transects the valley and the river provides riparian habitat and is a wildlife corridor to much less disturbed habitats in the hills that flank the valley. In the uplands around the valley there is a mix of less disturbed coastal plant communities including grasslands, chaparral, scrub, and oak and pine woodlands. Grasslands are altered by historic and current cattle grazing and the plant community is dominated by non-native grasses, which have replaced native perennial grasses. Woodlands are characterized by coast live oak and include other species such as non-native eucalyptus and pines. Upland chaparral and scrub communities are dominated by a mixture of lower evergreen species such as manzanita, salvia, ceanothus, and coyote brush (ESF, 2002).

In addition to the Salinas River, there are many important wetland habitats including the Salinas River estuary, the Old Salinas River, and the slough systems in the lower watershed west of the City of Salinas to the coast. These wetlands support many rare and endangered species such as the California red-legged frog and the tiger salamander.

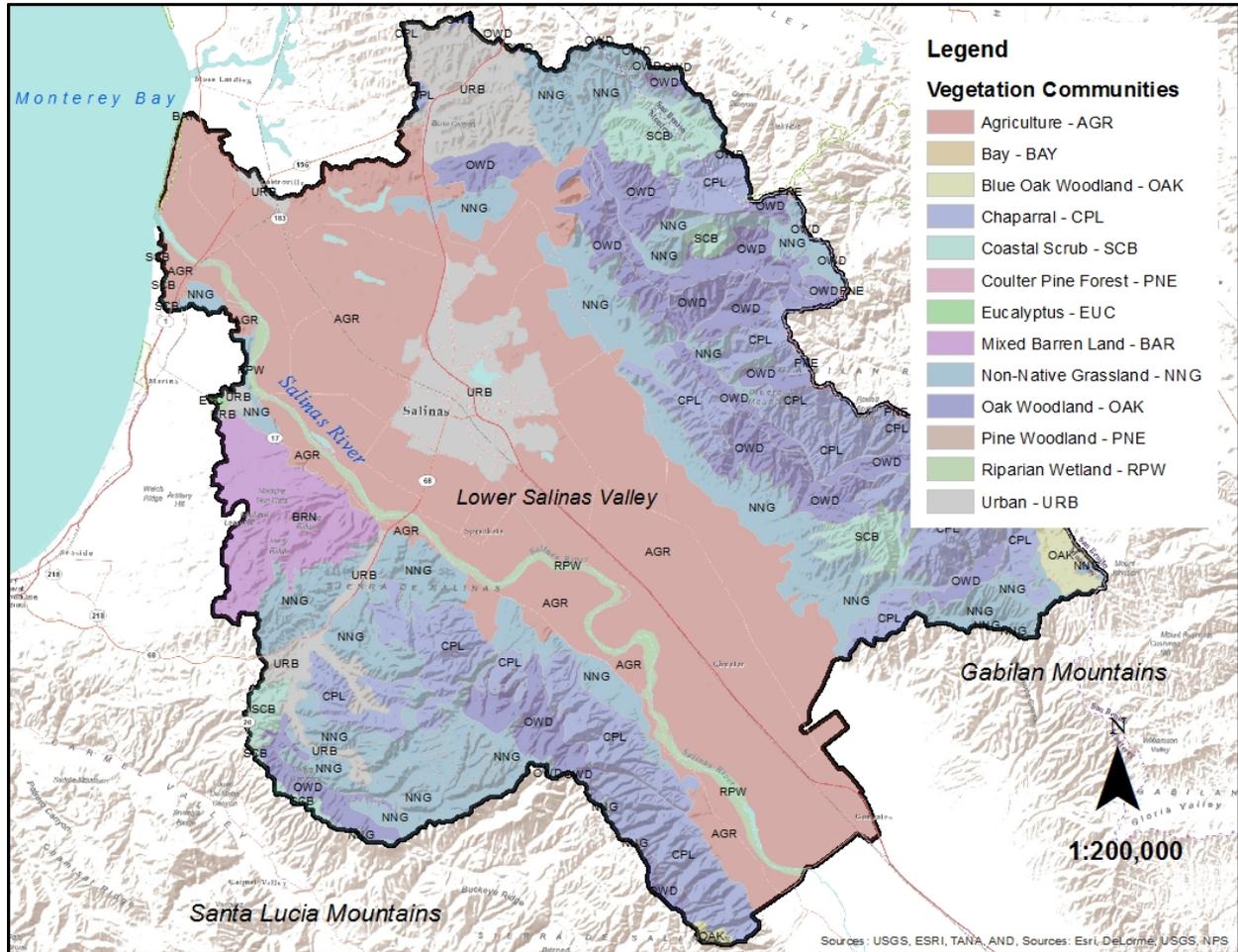


Figure 10. Map of plant communities

Air Quality: The lower Salinas River watershed is in the North Central Coast Air Basin and air quality in the basin is monitored and reported by the Monterey Bay Unified Air Pollution Control District. The air quality is assessed by comparison of monitoring data to federal and state government air quality standards and is assessed for the following parameters: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, carbon monoxide, inhalable fine particulate matter (PM_{2.5}), inhalable particulate matter (PM₁₀), and lead (Monterey Bay Unified Air Pollution Control District, 2007, 2015). As of January 2015, air quality standards in North Central Coast air basin were attained for all pollutants except the state standards for ozone and inhalable particulate matter (PM₁₀); however, the North Central Coast air basin meets the national PM₁₀ particulate matter standard – see Table 4.

Table 4. North Central Coast air basin air quality attainment status, January 2015.

Pollutant	State Standards	National Standards
Ozone (O ₃)	Nonattainment	Attainment/Unclassified
Inhalable Particulates (PM ₁₀)	Nonattainment	Attainment
Fine Particulates (PM 2.5)	Attainment	Attainment/Unclassified
Carbon Monoxide (CO)	Attainment	Attainment/Unclassified

Pollutant	State Standards	National Standards
Nitrogen Dioxide (NO ₂)	Attainment	Attainment/Unclassified
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead	Attainment	Attainment/Unclassified

Water Resources: Water is a critical resource in the lower Salinas River watershed for irrigated agriculture, municipal use, and aquatic habitats. Groundwater is the sole source of municipal water and the primary source for agricultural irrigation in the watershed. In addition to groundwater, recycled wastewater is also used to irrigate approximately 12,000 acres of farmland near Castroville. Groundwater is recharged in most part from infiltration of stream flows along the Salinas River along with some agricultural return flows and rainfall. Recharge is from sources in the Salinas River watershed and no water is imported from outside sources. The major tributaries to the Salinas River and sources of recharge are the undeveloped Arroyo Seco River watershed and the Nacimiento and San Antonio watersheds which have reservoirs. Reservoir releases are managed to optimize groundwater recharge, while sustaining aquatic habitats and critical species such as endangered steelhead in the Salinas River. Reservoir releases are managed by the Monterey Water Resource Agency, which also reports on groundwater extraction from the basins.

The lower Salinas River watershed overlies two hydrologic subareas, the Pressure (180 and 400 foot aquifers) and the East Side aquifer. The Forebay and the Upper Valley hydrologic subareas are up valley from the project area but are hydrologically linked as part of the broader Salinas River Groundwater Basin and are the primary water producing units of the Salinas Watershed in Monterey County. Within the project area the City of Salinas is the largest municipal water user and in 2013 it used 22,581 acre-feet. The next largest municipal user is the Castroville, which used 809 acre-feet in 2013. The Pressure and East Side aquifers are in overdraft and it along with seawater intrusion account for loss of aquifer storage. Seawater intrusion into groundwater wells has been identified in the Castroville area since the 1930 and is attributed to over pumping of groundwater. Aggressive measures have been recommended in the watershed to protect water supplies (Brown and Caldwell, 2014). Seawater intrusion has been observed moving further inland from original investigations in the 1940s.

Table 5. Total groundwater extraction by hydrologic subarea and type of use in 2013

Subarea	Agricultural Pumping (acre-feet)	Urban Pumping (acre-feet)	Total Pumping (acre-feet)
Pressure	98,141	19,101	117,242
East Side	82,895	14,727	97,622
Total	181,036	33,828	214,864
Percent of Total	84.3%	15.7%	100%

Source: Monterey County Water Resource Agency 2013 Extraction Report

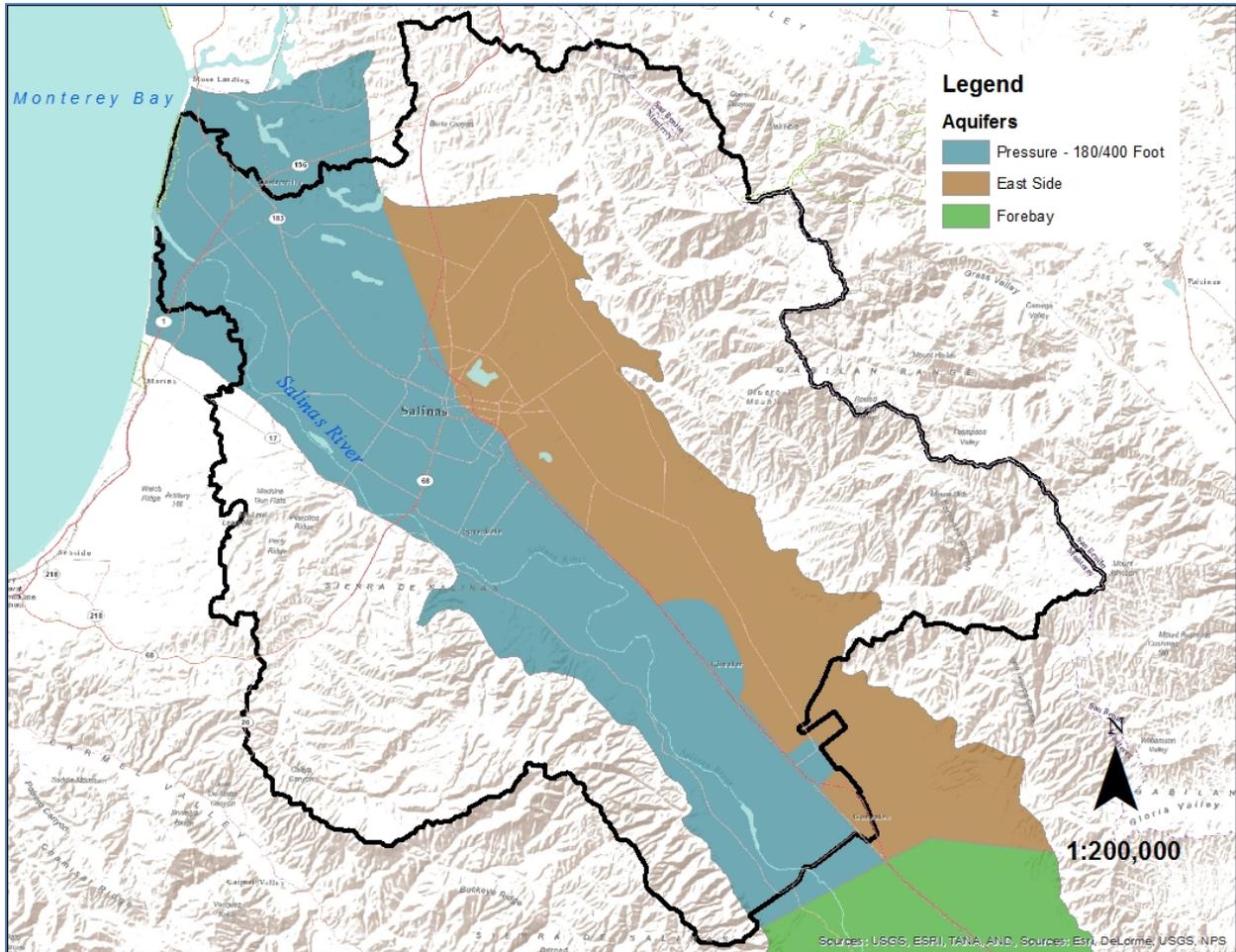


Figure 11. Aquifers in the lower Salinas River watershed

Wastewater Treatment: Monterey Regional Water Pollution Control Agency (MRWPCA) treats wastewater from communities in the southern Monterey Bay region at a centralized facility (refer to Figure 12). The communities of Salinas and Castroville in the project area pump waste water to the MRWPCA regional treatment plant. Farmlands in the lower watershed receive treated waste water for irrigation. Wastewater is also discharged through an ocean outfall pipe to Monterey Bay.

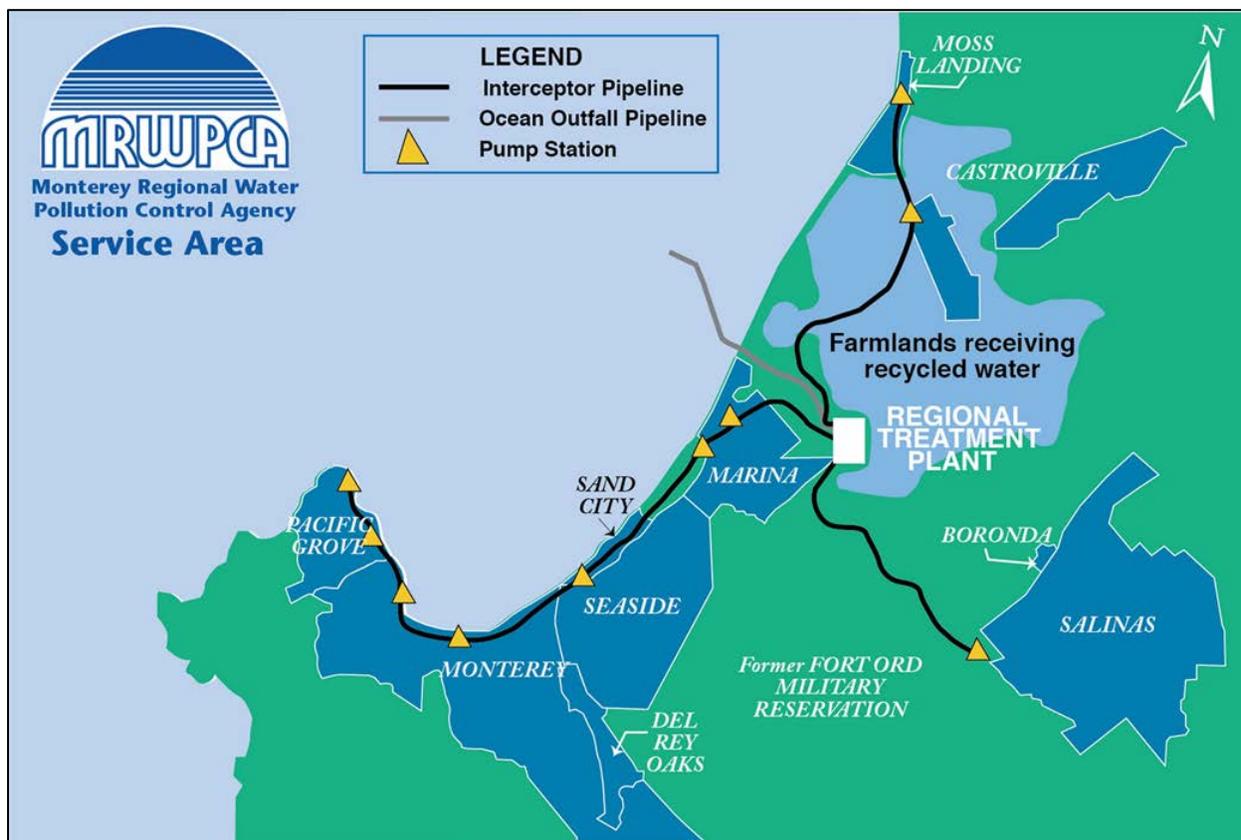


Figure 12. Areas served by MRWPCA, Source: MRWPCA

Flood Control/Drainage: The lower Salinas River watershed drains from south to north via two major channels, the Salinas River and the Reclamation Canal. The lower Salinas Valley floor is a broad alluvial plain with surface layers filled with sediments deposited from historic flooding. The source of flow into the valley is runoff from the Gabilan and Santa Lucia Ranges into the Salinas River. Three major upland tributaries drain to the Salinas River; the Nacimiento, San Antonio, and Arroyo Seco Rivers. The valley floor has urban and agricultural development and is prone to flooding (MCWRA, 2015). Major flooding events occurred in 1983 during an El Niño period and again in 1995 when many homes and business in Castroville were damaged (refer to Figure 13).

Properties in the Reclamation Canal subwatershed are particularly susceptible to flooding. The Reclamation Canal is a major drainage artery for the City of Salinas and adjacent farms. It is described by the Monterey County Water Resources Agency (MCWRA) as lacking sufficient hydrologic capacity to maintain watershed flood protection. The MCWRA maintains the canal to optimize flow and keeps it clear of debris and vegetation. MCWRA also operates drainage systems and pumps in areas such as Blanco Drain and Merritt Lake to lower water tables and drain low lying historic lake beds for farming. MCWRA also operates a series of tide gates in the lower part of the watershed to prevent inflows of high tides into the sloughs and channels and prevent flooding of farmland. Tide gates are operated on the Old Salinas River to maintain adequate water levels in the Salinas River estuary to support critical steelhead habitat.



Figure 13. Flooding in the lower Salinas River watershed, March 1995 (MCWRA, 2015)

Transportation/Traffic: The leading industry in Monterey County is agriculture, which is heavily dependent on the movement of products within and out of the county (MCRMA, 2007). The lower Salinas Watershed is the hub of agricultural production in the valley with many processing, cooling, packing, and transportation facilities for the region located in the City of Salinas. Tourism is the second largest industry in Monterey County and routes to major tourist attractions on the Monterey Peninsula are through the lower Salinas River watershed. The transportation system also functions to provide residents access to work, commercial services and centers, and recreational areas.

Major transportation system components in the lower Salinas River watershed include:

- **Regional Highways:** Four-lane U.S. Highway 101 is the major route north and south from the City of Salinas and it transects the project area. State Highway 183 connects the City of Salinas to Castroville. State Highway 1 crosses the northwestern edge of the watershed;
- **Major County Roads:** Blanco Road, River Road;
- **Arterial and Local Roads:** Boronda Road, Castroville Boulevard, Espinosa Road;
- **Regional Transit:** Monterey-Salinas Transit service;
- **Rail Services:** Amtrak passenger service, Union Pacific freight; and
- **Public Airport:** Salinas Municipal Airport.

4. DESCRIPTION OF TMDL ALTERNATIVES

CEQA environmental analysis of the TMDL includes an analysis of potentially feasible alternatives that encompass actions within the jurisdiction of the Central Coast Water Board and implementing parties. During development of the TMDL, Central Coast Water Board staff considered several alternatives that are described below. The program alternatives considered are: a.) no action alternative, b.) aquatic toxicity numeric criteria TMDL alternative, and c.) TMDLs for sediment toxicity and pyrethroid pesticides.

a. No Action Alternative

Because a TMDL is required by Section 303(d) of the Clean Water Act, the No Action Alternative is analyzed to allow decision makers to compare the impacts of approving a proposed alternative and its components compared with the impacts of not approving a proposed alternative.

Under the No Action Alternative existing programs would be relied up to address water quality impairments but the Central Coast Water Board would not require TMDL implementation or monitoring. Existing efforts would continue to implement management practices and monitor water quality under existing programs and it is likely that water quality would continue to improve. However, the efforts would not be directed towards the specific water quality impairments identified in the TMDL and progress towards meeting TMDL goals would not be monitored. This could leave designated beneficial uses of surface waters unprotected or unrestored for a longer period of time.

Although agricultural and commercial uses of pyrethroids are regulated to protect water quality by DPR, consumer applications are not and stormwater programs would be an important mechanism for engagement. In 2012 DPR developed urban use regulations for commercial applications and the TMDL monitoring will provide a means to assess effectiveness of the regulations. Also approval of the TMDL is an important step for organizations in the watershed to obtain grant funds for water quality planning and implementation. Although the agricultural implementation relies on the existing permit, referred to as the Agricultural Order, the TMDL is a planning tool that provides information on sources of water quality problems, sets water quality targets and allocation, describes implementation and outlines a means to assess implementation effectiveness. Without these TMDL components it will be difficult to achieve water quality standards.

It is important to recognize that the No Action Alternative is inconsistent with federal law. The federal Clean Water Act requires states to establish lists of impaired waters and develop TMDLs for those waters. Therefore, the failure to adopt and implement TMDLs for sediment toxicity and pyrethroids would be incompatible with statutory requirements.

b. Aquatic Toxicity Numeric Criteria TMDL Alternative

With the aquatic toxicity TMDL alternative, dischargers would only receive TMDLs based on standard USEPA numeric aquatic toxicity tests (refer to Table 6) and they would not receive numeric sediment concentration based TMDLs for specific pyrethroid pesticides. Toxicity to invertebrates would be tested using only a chronic toxicity test (refer to Table 6 for a description). A toxicity determination would be based on a comparison of the test organisms' response to the receiving water sample compared to the control using a statistical evaluation. Along with toxicity tests, if a sample is declared *fail* (i.e., toxic), then additional receiving water sample(s) would be collected and evaluated to determine the causative toxicant(s).

Table 6. USEPA Standard Aquatic Toxicity Tests

Parameter	Test	Biological Endpoint Assessed	Test Method #
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Sediment Toxicity	<i>Hyalella azteca</i> (10-day chronic)	Survival	USEPA 100.1 using alpha of 0.25
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The utility of having the target be a toxicity-based metric is that the TMDL will address pesticides currently identified as causing the impairment, and will also identify other toxicants. It is important to use toxicity as an indicator because the approach incorporates the potential effects of the pesticide active ingredient, the other chemicals in the formulated product, breakdown products, and the interaction among these chemicals in addition to other chemicals in the receiving water. It also addresses any alternative pesticides which may be used in the future. The toxicity target assessment is an interpretation of the Basin Plan toxicity narrative objective.

Central Coast Water Board staff considered the numeric aquatic toxicity only TMDL as an alternative and determined that it would be achievable and protective of aquatic life beneficial uses from currently applied pyrethroid pesticides. However, test organisms are susceptible to a broad group of pyrethroid pesticide active ingredients and by identifying and having allocations for specific pyrethroids; implementation actions can be more precisely directed. With more focused implementation, water quality problems could be more quickly addressed. Staff compared the potential environmental impacts of the toxicity TMDL alternative to the TMDLs for sediment toxicity and pyrethroids and determined that the impacts would be equivalent. However, the impacts would likely occur over a longer time period.

c. TMDLs for Sediment Toxicity and Pyrethroid Pesticides in Sediment

This alternative is based on the TMDLs for Sediment Toxicity and Pyrethroid Pesticides in Sediment that is presented and proposed for Central Coast Water Board consideration. The TMDL Technical Project Report provides a summary of surface waters in the lower Salinas River watershed impaired with sediment toxicity and pyrethroid pesticides and the Clean Water Act TMDL requirements. The TMDL develops numeric targets for specific pesticides impairing surface waters along with toxicity targets. Point and nonpoint sources of pollutants are also identified and assigned allocations to meet the targets. This alternative includes a range of TMDLs to assure protection of beneficial uses of surface waters.

The following TMDLs are included in the preferred alternative:

- Sediment toxicity TMDLs
- TMDLs for pyrethroid pesticides in sediment

The TMDL Technical Project Report (Attachment 2 to the Staff Report) describes existing and proposed implementation and monitoring programs to address impaired waters. Implementation measures are described in Section 5. Staff acknowledges that the implementation of reasonably foreseeable compliance methods identified in Section 5 could result in potentially significant environmental impacts. However the CEQA documentation provides the necessary information pursuant to state law to conclude that the potential environmental impacts from TMDL implementation are outweighed by the environmental benefits achieved from improving and protecting the beneficial uses of water.

d. Recommended Program Alternative

This environmental analysis finds that the recommended program alternative, c. TMDLs for Sediment Toxicity and Pyrethroid Pesticides, is the most environmentally feasible alternative. The key difference between this alternative and the aquatic toxicity only TMDL is an increased focus on specific pyrethroid pesticides that were identified as sources of sediment toxicity. This reduces the negative impact to the environment from these pesticides and increases the awareness of specific materials causing toxicity. This should lead to the implementation of management practices that are more appropriate to the specific fate and transport properties of the detected pesticides, instead of broad generic pesticide management practices. The recent DPR urban pyrethroid regulations are an example of focused regulations and the implementation of management practices directed to a specific pesticide pollution problem. In the case of pyrethroids, DPR developed use restriction management practices specific to pyrethroids that limit the amount of pesticide applied to impermeable outdoor surfaces, such as concrete, that are susceptible to runoff and they prohibit application over drains and applications during rain. With more pesticide-specific implementation, the TMDL has more tangible milestones to track during TMDL implementation.

5. DESCRIPTION OF IMPLEMENTATION ALTERNATIVES

This section of the CEQA Checklist and Analysis provides a description of implementation alternatives also referred to as management practices. The Central Coast Water Board is prohibited from specifying the manner of compliance with its regulations (Water Code § 13360), and accordingly, the actual compliance strategies and management practices will be selected by responsible parties. Although the Central Coast Water Board does not mandate the manner of compliance, foreseeable methods of compliance are outlined below.

Table 7. Description of management practices

Management Practice	Description	Reference
Deep Tillage and Ripping	<p>Deep tillage is the practice of loosening the soil, without inverting and with a minimum of mixing of the surface soil, to shatter restrictive layers below the normal plow depth that inhibit water movement or root development.</p> <p>Deep tillage decreases runoff of pesticides by increasing infiltration. The practice can increase groundwater recharge and leaching of pesticides and nitrates.</p>	NRCS Practice: Deep Tillage #324
Field Leveling	The leveling of fields and aligning of beds to slopes no greater than 1% and ideally to a slope of 0.2%. Field leveling increases infiltration and reduces runoff. The practice	NRCS Practice: Irrigation Land Leveling #464

Management Practice	Description	Reference
	can involve extensive earth moving and use of precision earth moving equipment, which may be costly.	
Irrigation Efficiency	<p>High distribution uniformity, drip irrigation when feasible, and use of water management tools (soil moisture analysis, plant water requirements, and evapotranspiration rates).</p> <p>Efficient water use and distribution minimizes the movement of sediment and pesticides in runoff.</p>	<p>NRCS Practice: Irrigation Water Management #449 and Irrigation System Microirrigation #441</p>
PAM (Anionic Polyacrylamide)	<p>PAM is an irrigation water additive that keeps surface soil particles from detaching and flocculates soil particles in runoff. PAM increases infiltration and greatly reduces erosion.</p> <p>There are some environmental concerns with aquatic toxicity from cationic PAM formulations. However, there are no problems associated with using anionic PAM. PAM requires specialized equipment to apply. Although the initial irrigation treatment set up is costly, the ongoing application costs are relatively low. Drainage runoff treatment systems are less expensive.</p>	<p>NRCS Practice: Anionic Polyacrylamide (PAM) #450</p> <p>UC Extension guide to using PAM</p>
Collect Water and Sediment in Head Ditches	Use drainage ditches at the end of agricultural fields to collect excess irrigation run-off and sediment.	NRCS Practice: Surface Drainage Ditch #607 and # 608
Cover Crops	<p>Non-crop vegetation planted in fields to increases infiltration, reduces run-off and provides organic matter. Cover crops can be planted over entire fallow fields or planted in furrows between beds.</p> <p>Vegetation residues from cover crops must be tilled in prior to planting and may delay spring planting. Lower residue cover crops have been studied by UC Extension to address this issue and</p>	<p>NRCS Practice: Cover Crop # 340</p> <p>UC Extension cover crop study: Practices to Increase Groundwater Recharge in the Salinas Valley</p>

Management Practice	Description	Reference
	found to be very effective.	
Sediment Ponds and Basins	<p>Sediment basins are earthen basins at the lower ends of fields or drainage channels to detain run-off and trap sediments.</p> <p>Sediment basins reduce runoff and sediment leaving properties. They can take up farmable land and cause pollutants such as nitrate to leach to groundwater.</p>	<p>NRCS Practice: Water and Sediment Control Basin #638</p>
Vegetative Treatment Systems (VTS)	<p>Drainage ditch treatment systems comprised of a sediment settling basin section of ditch for removing large grain sediment followed by a vegetative section for removing fine sediments. DPR funded a study by UC Davis of VTS in the watershed and the results indicate that the systems are very effective in reducing sediment loading and pyrethroid concentrations. The planting of vegetation near fields is a food safety concern for growers.</p>	<p>DPR Study: 09-C0079</p>
Vegetative Buffer Strip	<p>Conservation buffers are small strips of permanent vegetation between agricultural fields and off-site areas. Buffers intercept off-site flows trapping sediment and pesticides. Conservation buffers are an USEPA pyrethroid pesticide label requirement.</p> <p>Conservation buffers can remove land from agricultural production and vegetation can be a host for wildlife and a food safety concern.</p>	<p>USDA Publication: Conservation Buffers to Reduce Pesticide Losses</p>
Vegetated Ditches	<p>Vegetation in ditches between fields and manmade channels can adsorb pesticides and retains sediment. Studies have found that vegetative ditches can mitigate pyrethroid runoff from fields.</p> <p>Vegetation in channels reduces flow and can pose a risk for flooding. Ditches require maintenance to control vegetation</p>	<p>NRCS Practice: Channel Vegetation #322</p> <p>USDA Drainage Ditch Research</p> <p>USDA Drainage Ditch Researcher Matt Moore</p>

Management Practice	Description	Reference
	and remove sediment. Vegetation can harbor wildlife, which is a food safety concern.	
Constructed or Restored Wetlands	<p>Constructed wetlands are effective in removing pyrethroid pesticides in run-off. A DPR study found that treatment wetlands on average reduced total pyrethroid sediment concentration by 64%. In addition to mitigating pyrethroids, studies also show that wetlands mitigate herbicides and nutrients.</p> <p>Construction of new wetlands could be expensive to build and maintain. Constructed wetlands could also take farmland out of production.</p> <p>Wetland vegetation can harbor wildlife, which is a food safety concerns.</p>	<p>DPR Monitoring Study: A Tale of Two Wetlands: Using Constructed Wetlands to Mitigate Pesticides in Urban Runoff</p>
Woodchip Nitrate Bioreactor Treatment Systems	Bioreactor systems are large wood chip beds for treating run-off. They are primarily intended to remove nitrate from runoff but could also remove pesticides that adsorbed to wood chips.	
Low Impact Development (LID)	LID is urban development with little run-off and high levels of site drainage infiltration. Specific LID techniques include: rain barrels and cisterns, green roofs, permeable paving surfaces for driveways and patios, rain interceptor trees, soil amendments to improve infiltration, directing roof downspouts to pervious areas and retention grading and vegetated swales.	<p>Central Coast LID Initiative State Water Board LID Webpage USEPA LID Webpage</p>
Low Run-off Risk Structural Pest Control Application Methods and Urban IPM	Management strategies include making homes less attractive to pests, using baits, spot treatments, crack and crevice treatments, avoiding applications to hard surfaces and avoiding applications to drainage areas, avoiding applications during precipitation, and pin stream treatment. DPR	<p>Announcement of DPR Regulations</p> <p>Final Regulations</p>

Management Practice	Description	Reference
	has recently adopted urban pesticide regulations that require professional applicators to use IPM application strategies.	
Integrated Pest Management (IPM)	IPM is an ecosystem based management strategy used to address pest problems while minimizing risks to people and the environment.	NRCS Practice: Integrated Pest Management #595 UC IPM: Statewide Integrated Pest Management Program
Discontinue Using Pyrethroids	To achieve the water quality goals of the TMDL, dischargers could discontinue using pyrethroid pesticides and use alternative materials. Dischargers could discontinue use voluntarily or to meet pesticide or water quality regulations.	USEPA diazinon regulations are an example. USEPA canceled all residential use of diazinon in 2004 and canceled many agricultural uses in 2007. USEPA: Diazinon cancelation factsheet Another example is the Water Board's Aq. Order that requires extensive monitoring for some diazinon and chlorpyrifos use.

6. ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. --Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is not attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
policy or ordinance?				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
life or property				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste-water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VII. GREENHOUSE GAS EMISSIONS Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VIII. HAZARDS AND HAZARDOUS MATERIALS Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
interfere with an adopted emergency response plan or emergency evacuation plan?				
h) Expose people or structures to a significant risk of loss injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. HYDROLOGY AND WATER QUALITY -Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete ground water supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
structures which would impede or redirect flood flows?				
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. LAND USE AND PLANNING Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XI. MINERAL RESOURCES -- Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. NOISE Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
without the project?				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XIV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XV. RECREATION –				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				
XVI. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVII. UTILITIES AND SERVICE SYSTEMS -Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

7. ENVIRONMENTAL EVALUATION DISCUSSION

The Environmental Substitute Document must include an analysis of the reasonably foreseeable environmental impacts of the methods of compliance/management practices, and the reasonably foreseeable mitigation measures relating to those impacts.

A significant effect on the environment is defined in regulation as:

“a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.”
(14 CCR section 15382).

Also noteworthy, CEQA Section 15064 states that:

“(b) The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area.”

The following includes Central Coast Water Board staff’s environmental evaluation discussion on the basis of the CEQA Environmental Checklist presented previously in Section 6.

I. AESTHETICS

Would the project:

(a) – Have a substantial adverse effect on a scenic vista?

Answer: No impact.

Discussion: None of the reasonably foreseeable management practices identified in Section 5 are expected to have an adverse impact on a scenic vista. None of them would either block a scenic vista or substantially degrade a scenic vista.

(b) – Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Answer: No impact.

Discussion: There are several scenic highways and roadways in the TMDL area including Highway 68 and Highway 156 (refer to Figure 14). These highways have views of farms and drainages that could implement management practices for the TMDL. The types of management practices that could be implemented are consistent with existing agricultural and drainage management practices and would not be a substantial change in scenic resources.

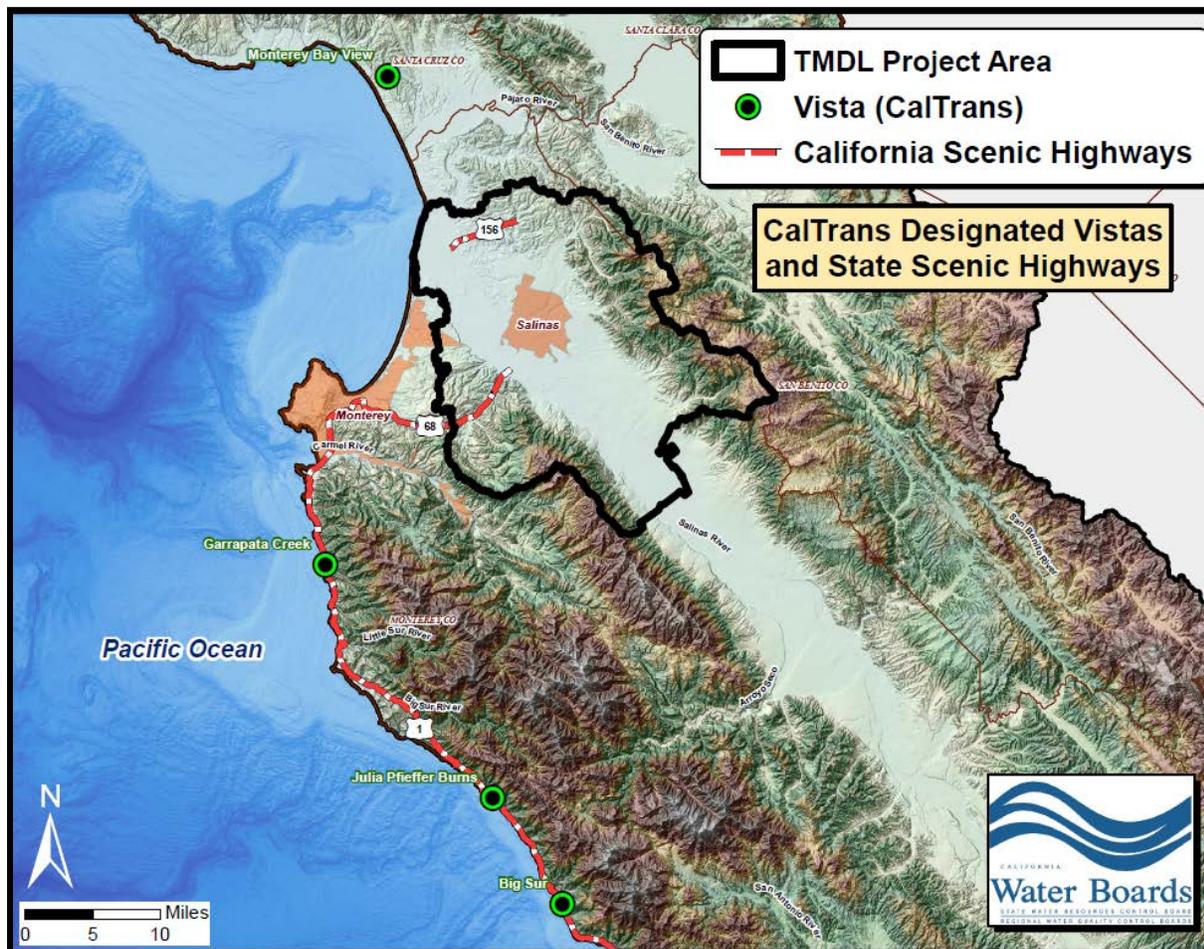


Figure 14. State scenic highways and scenic vistas.

(c) – Substantially degrade the existing visual character or quality of the site and its surroundings?

Answer: No impact.

Discussion: Reasonably foreseeable management practices identified in Section 5 are of such a nature such that they are not expected to degrade the visual character or quality within the TMDL area.

(d) – Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Answer: No impact.

Discussion: Reasonably foreseeable management practices identified in Section 5 are of a nature such that they would not create new sources of substantial light or glare which adversely affect day or nighttime views in the TMDL area.

II. AGRICULTURE RESOURCES:

Would the project:

(a) – Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Answer: Potentially significant impact.

Discussion: The proposed TMDL does not propose or require any person to take agricultural lands out of production. Rather, the proposed TMDL relies on implementation based of the Agricultural Order, which is an existing regulatory program adopted by the Central Coast Water Board. The Agricultural Order requires growers to comply with the Water Code and the Basin Plan by implementing management practices to reduce or eliminate discharges of pollutants into surface and groundwater to the extent that water quality objectives are achieved and beneficial uses protected.

After evaluating potential management practices, staff concludes that there could be two types potentially significant impacts to Farmland from implementing the TMDL; these impacts are: 1) the of loss of agricultural productivity due to discontinued use of pesticides and 2) loss of prime agricultural land due to implementation of structural management practices, such as sediment basins and constructed wetlands.

Pyrethroids are very important insecticides for growing valuable crops such as artichokes, lettuce, broccoli, celery, and strawberries in the lower Salinas River watershed and there are very low tolerances for insect pests and insect damage on these crops. In the watershed pyrethroids are used to control lygus bug and bagrada bug, which are key pest to these crops (Joseph, 2015). The availability and effectiveness of alternative insecticides, which could mitigate crop loss is limited, therefore without pyrethroids significant crop loss could occur and could impact the viability of Farmland.

Pyrethroid pesticides can move off farms in runoff and bound to sediment. Sediment basins and constructed wetlands are practices that can be used to control sediment and treat runoff. These practices could be constructed on farmland and could take viable farmland out of production (refer to Figure 15).



Figure 15. Sediment basin at the edge of farm field in the Salinas River watershed

(b) – Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Answer: No impact.

None of the reasonably foreseeable non-structural or structural management practices identified in Section 5 would be expected to conflict with existing zoning for agricultural uses or a Williamson Act contract. Agricultural management practices are consistent with agricultural zoning and would not change the land use designation.

(c) – Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Answer: Potential significant impacts.

Discussion: Stakeholders have concerns about vegetated treatment systems, treatment wetlands, and vegetative buffers attracting wildlife which might impact leafy green production and be a risk to food safety, thereby indirectly taking viable farmland out of production due to issues arising from food safety risks. It should be noted that many animals (birds, rodents, deer etc.) presently use degraded drainages. Food safety risk could be mitigated through rodent fencing and raptor poles to reduce rodent populations and proper selection of plant species that

deter pest species. Implementation of these mitigation measures are within the jurisdiction of the responsible parties listed in the TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These parties have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

(a) – Conflict with or obstruct implementation of the applicable air quality plan?

Answer: No Impact.

Discussion: None of the reasonably foreseeable management practices identified in Section 5. would be expected to result in any conflicts with or obstruction to the implementation of the applicable air quality plan. The implementation measures do not result in changes in traffic that could cause an increase in emission, therefore the TMDL is consistent with plans such as the Air Quality Attainment Plan (MBUAPCD, 2008). The Air Quality Attainment Plan is the county's plan to attain the state ozone standard and the plan accounts for construction and agricultural emissions, such as would be generated by implementing the TMDL.

(b) – Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Answer: Less than significant.

Discussion: Please refer to the below subsection (c) for a discussion of violation of air quality standards.

(c) – Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is not attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Answer: Less than significant.

Discussion: The north central coast air basin including Monterey County does not attain state clean air standards for ozone and fine particulate matter-PM₁₀ (refer back to Table 4 on page 18). Some of the management practices identified in Section 5 could potentially result in short-term net increase of these pollutants during construction. Vehicle emissions are a major source of ozone precursor emissions (reactive organic compounds and nitrogen oxides) and grading and agricultural tilling are sources of fine particulate matter. These impacts are expected to be insignificant given the size of the project area, which is the lower Salinas River watershed.

Standard dust control construction management practices should mitigate fine particulate pollutions from soil disturbance from the construction of management practices. Construction includes activities such as grading and excavating basins or tilling for vegetation planting. For

most construction projects in Monterey County, grading ordinances require dust control measures.

The project should not result in long-term impacts to air quality since the project should increase vegetation on bare ground along farms and in drainage channels. Also there should not be any long-term increases in emissions because implementation project construction would occur for a short period of time.

(d) – Expose sensitive receptors to substantial pollutant concentrations?

Answer: Potentially significant impact.

Discussion: Construction of structural management practices could potentially expose sensitive receptors such as schools, residences, apartments, and hospitals to temporary increased levels of fine particulate matter. In the lower Salinas River watershed, urban areas are in close proximity to irrigated agricultural land uses and drainage channels that may be subject to excavation and grading for the construction of structural management practices identified in Section 5. Additionally, management practices could be constructed within the municipalities to implement the TMDLs.

Standard dust control construction management practices should address fine particulate pollutions from soil disturbance activities such as grading and excavating basins or tilling for vegetation plantings. For most construction projects in Monterey County and within the City of Salinas, grading ordinances require standard dust control measures.

(e) – Create objectionable odors affecting a substantial number of people?

Answer: Less than significant with mitigation incorporation.

Discussion: If not properly maintained, woodchip bioreactors have the potential to produce hydrogen sulfide gas, which has an objectionable odor (Christianson et.al, 2011). If this were to occur, the impact could potentially be significant. However, this impact is avoidable and can be mitigated if systems are designed to a suitable treatment capacity and operated properly.

IV. BIOLOGICAL RESOURCES

Would the project:

(a) – Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Answer: Less than significant with mitigation incorporation

Discussion: Reasonably foreseeable management practices identified in Section 5 could have potentially significant impacts on special status species. There are 55 rare, sensitive, threatened or endangered species in the TMDL project area according to digital map files available from the California Natural Diversity Database (CNDDB, data from June, 2008) – see Table 8. The CNDDB is a program that inventories the status and location of rare plants, animals and insects

in California. Of the 55 species in the project area, 43 occur in project area lands classified as farmland or urban where most TMDL implementation would take place¹.

Table 8. Rare, sensitive, threatened or endangered species in the TMDL project area.

SCIENTIFIC NAME	COMMON NAME	FEDERAL LEGAL STATUS	CALIF. LEGAL STATUS	STATE RANKING THREAT DESIGNATION
<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	Carmel Valley bush-mallow	None	None	S2.2
<i>Ambystoma californiense</i>	California tiger salamander	Threatened	None	S2S3
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	None	None	S3.2
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	Threatened	None	S2
<i>Horkelia cuneata</i> ssp. <i>sericea</i>	Kellogg's horkelia	None	None	S1.1
<i>Phrynosoma coronatum</i> (frontale population)	coast (California) horned lizard	None	None	S3S4
<i>Anniella pulchra nigra</i>	black legless lizard	None	None	S2
<i>Reithrodontomys megalotis distichlis</i>	Salinas harvest mouse	None	None	S1
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	sand gilia	Endangered	Threatened	S2.2
<i>Chorizanthe pungens</i> var. <i>pungens</i>	Monterey spineflower	Threatened	None	S2.2
<i>Tryonia imitator</i>	mimic tryonia (=California brackishwater snail)	None	None	S2S3
<i>Agelaius tricolor</i>	tricolored blackbird	None	None	S2
<i>Trifolium buckwestiorum</i>	Santa Cruz clover	None	None	S1.1
<i>Linderiella occidentalis</i>	California linderiella	None	None	S2S3
<i>Rana draytonii</i>	California red-legged frog	Threatened	None	S2S3
<i>Ericameria fasciculata</i>	Eastwood's goldenbush	None	None	S2.1
<i>Rosa pinetorum</i>	pine rose	None	None	S2.2
<i>Arctostaphylos pajaroensis</i>	Pajaro manzanita	None	None	S2.1
<i>Arctostaphylos montereyensis</i>	Toro manzanita	None	None	S2.1
<i>Actinemys marmorata pallida</i>	southwestern pond turtle	None	None	S2
<i>Eriogonum nortonii</i>	Pinnacles buckwheat	None	None	S2.3
<i>Lasthenia conjugens</i>	Contra Costa goldfields	Endangered	None	S1.1
<i>Euphilotes enoptes smithi</i>	Smith's blue butterfly	Endangered	None	S1S2
<i>Athene cucularia</i>	burrowing owl	None	None	S2
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	seaside bird's-beak	None	Endangered	S1.1
<i>Taxidea taxus</i>	American badger	None	None	S4
Central Dune Scrub	Central Dune Scrub	None	None	S2.2
<i>Erysimum ammodophilum</i>	sand-loving wallflower	None	None	S2.2
<i>Coelus globosus</i>	globose dune beetle	None	None	S1
<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	saline clover	None	None	S2.2?
Coastal Brackish Marsh	Coastal Brackish Marsh	None	None	S2.1
<i>Falco mexicanus</i>	prairie falcon	None	None	S3
<i>Allium hickmanii</i>	Hickman's onion	None	None	S2.2
<i>Ambystoma macrodactylum croceum</i>	Santa Cruz long-toed salamander	Endangered	Endangered	S1
<i>Piperia yadonii</i>	Yadon's rein orchid	Endangered	None	S2.1
<i>Stebbinsoseris decipiens</i>	Santa Cruz microsaris	None	None	S2.2
Valley Needlegrass Grassland	Valley Needlegrass Grassland	None	None	S3.1
<i>Riparia riparia</i>	bank swallow	None	Threatened	S2S3
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	Hooker's manzanita	None	None	S2?
<i>Eucyclogobius newberryi</i>	tidewater goby	Endangered	None	S2S3
<i>Asio flammeus</i>	short-eared owl	None	None	S3
<i>Delphinium hutchinsoniae</i>	Hutchinson's larkspur	None	None	S2.1
<i>Thamnophis hammondi</i>	two-striped garter snake	None	None	S2

¹ Based on the spatial intersection of Calif. Dept. of Conservation Farmland Mapping and Monitoring program digital land use shape files classified as farmland or urban, and CNDDDB shape files within the TMDL project area

SCIENTIFIC NAME	COMMON NAME	FEDERAL LEGAL STATUS	CALIF. LEGAL STATUS	STATE RANKING THREAT DESIGNATION
Accipiter cooperii	Cooper's hawk	None	None	S3
Central Maritime Chaparral	Central Maritime Chaparral	None	None	S2.2
Eremophila alpestris actia	California horned lark	None	None	S3
Erysimum menziesii ssp. yadonii	Yadon's wallflower	Endangered	Endangered	S1.1
Chorizanthe robusta var. robusta	robust spineflower	Endangered	None	S1.1
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	None	None	S3.2
Helminthoglypta sequoicola consors	redwood shoulderband	None	None	S1
Arctostaphylos gabilanensis	Gabilan Mountains manzanita	None	None	S1.2
Arctostaphylos pumila	sandmat manzanita	None	None	S2.2
Danaus plexippus	monarch butterfly	None	None	S3
Astragalus tener var. tener	alkali milk-vetch	None	None	S1.1
Fritillaria liliacea	fragrant fritillary	None	None	S2.2

The State Rank (S-rank) is a ranking methodology which is intended to reflect of the overall conditions and conservation status of an element over its state distribution to inform biodiversity conservation.

State Ranking Threat Designations

S1 = Less than 6 Element Occurrences (Eos) OR less than 1,000 individuals OR less than 2,000 acres

S1.1 = very threatened

S1.2 = threatened

S1.3 = no current threats known

S2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

S2.1 = very threatened

S2.2 = threatened

S2.3 = no current threats known

S3 = 21-100 EOs or 3,000-10,000 individuals OR 10,000-50,000 acres

S3.1 = very threatened

S3.2 = threatened

S3.3 = no current threats known

S4 - Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat. NO THREAT RANK.

S5 - Demonstrably secure to ineradicable in California. NO THREAT RANK.

Impacts to identified species could occur when installing structural management practices that involve significant earth-moving or land disturbance. In areas where sensitive species are located, the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service should be consulted prior to implementation. It is anticipated that in most cases installation of structural compliance measures would be of relatively small scale and any impacts could be avoided by adjusting the timing and/or location of the compliance measures to take into account rare, sensitive, threatened or endangered species or their habitats. Additionally, it may be necessary to monitor sites during construction for the presence of identified species of concern.

Staff concludes that there are potentially significant impacts from implementation of the TMDL, but notes that there are mitigation measures available to reduce the potentially significant environmental impacts. Implementation of these mitigation measures are within the jurisdiction of the responsible parties listed in this TMDL (Title 14, California Code of Regulations, Section 15091(a)(2)). These parties have the ability to implement these mitigation measures, can and should implement these mitigation measures, and are required under CEQA to implement mitigation measures unless mitigation measures are deemed infeasible through specific considerations (Title 14, California Code of Regulations, Section 15091(a)(3)).

(b) – Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Answer: Less than significant impact.

Discussion: Substantial adverse effects on any riparian habitat or other sensitive natural community are not anticipated. The management practices identified in Section 5 promote the protection of riparian areas and are expected to be a net benefit to these sensitive communities. None of the reasonably foreseeable compliance methods would have the potential to adversely affect any riparian habitat or other sensitive natural community of plants identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

(c) – Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Answer: Less than significant impact.

Discussion: The structural and the non-structural management practices identified in Section 5 are not anticipated to have a substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act. The compliance methods identified would promote the protection of existing wetlands and the construction of new, engineered wetlands to protect water quality. The application of compliance measures in federally protected wetland areas would not be allowed if doing so would affect the beneficial uses associated with that wetland. All activities in federally protected wetlands, except those with statutory exemption like agricultural, require the responsible party to obtain a federal Clean Water Act 404 permit. The federal permit must include compliance measures that ensure that all water quality objectives for the wetland are protected.

(d) – Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Answer: Less than significant impact.

Discussion: Management practices identified in Section 5 will not substantially interfere with migratory fish or wildlife because structural compliance methods are not required within stream channels. Also, reasonably foreseeable compliance methods are not anticipated to be spatially large-scale, contiguous, or numerous enough to block migration or use of wildlife nursery sites. In addition many of the manage practices are designed for riparian and wetland protection, restoration, and enhancement, which would enhance wildlife corridors.

(e) – Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Answer: No impact

Discussion: None of the reasonably foreseeable non-structural or structural compliance methods identified in Section 5 would be expected to conflict with ordinances protecting biological resources, such as a tree preservation policy or ordinance.

(f) – Conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Answer: No impact.

Discussion: Based on available data there are no adopted Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) currently located in the TMDL project area; therefore there are no impacts to HCPs or NCCPs. The watershed is located within a steelhead recovery planning areas; however the goals of the TMDL are consistent with steelhead recovery goals (NMFS, 2013).

V. CULTURAL RESOURCES

Would the project:

(a) –Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Answer: Less than significant with mitigation incorporation.

Discussion: Implementation of management practices is not expected to result in substantial, or potentially substantial, adverse changes to the significance of historical resources in the project area as defined in CEQA regulations. Non-structural management practices do not involve land-disturbance or physical effects, which could impact historical resources. Similarly, staff concludes it is unlikely that implementation of any structural management practices would result in a substantial adverse change in the significance of a historical resource. Most structural management practices do not involve substantial or large-scale disturbance to land which has not been disturbed previously (e.g., irrigated cropland or urban stormwater conveyance structures). If the installation of any structural management practices involves large scale excavation or land-disturbance activities, a cultural resources investigation should be conducted beforehand for mitigation. The cultural resources investigation should include, at a minimum, a records search for previously identified cultural resources and previously conducted cultural resources investigations of the project parcel and vicinity. As an additional mitigation measure, during construction onsite monitoring by a cultural resource specialist should occur.

Figure 16 depicts the existing known historical resources in the TMDL project area, which number approximately two dozen sites. Notable historic resources in the TMDL project area include the Site of the Battle of Natividad near Salinas and the Jose Eusebio Boronda Adobe Casa in Boronda (source: Monterey County 2007 General Plan).

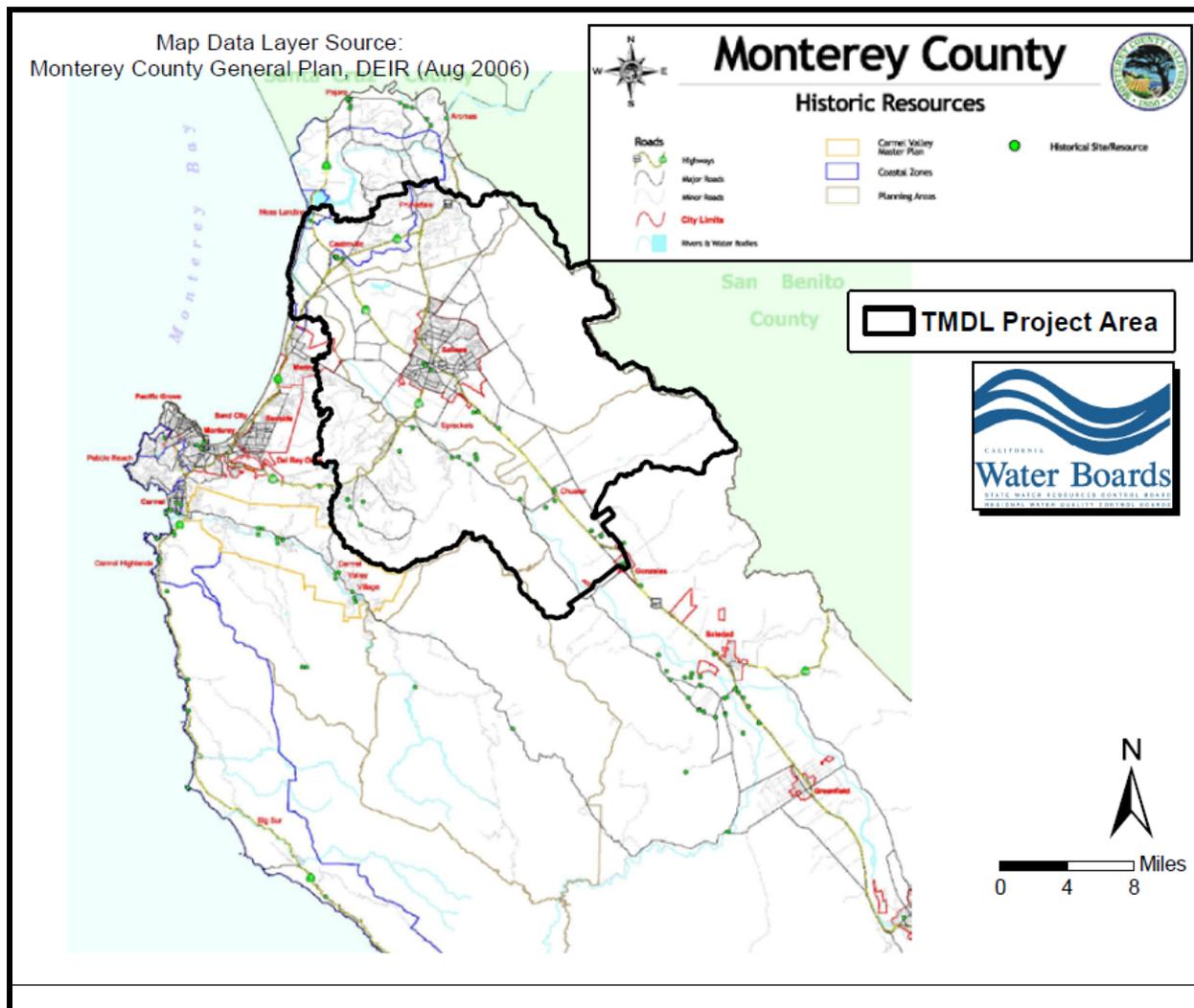


Figure 16. Location of historic resources within the vicinity of the project area

(b) –Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Answer: Less than significant with mitigation incorporation.

Discussion: With the mitigation, the implementation of management practices in the TMDL project area is not expected to result in substantial, or potentially substantial, adverse changes to the significance of archeological resources as defined in CEQA regulations. Installation of structural management practices may involve large scale excavation or land-disturbance activities and therefore a cultural resources investigation should be conducted beforehand. The cultural resources investigation should include, at a minimum, a records search for previously identified cultural resources in the vicinity of the site. The record search should also include, at a minimum, contacting the appropriate information center of the California Historical Resources Information System, operated under the auspices of the California Office of Historic Preservation. In coordination with the information center or a qualified archaeologist, a determination regarding whether previously identified cultural resources would be affected by the proposed project must be made. The investigation should determine if previously conducted investigations were performed to satisfy the requirements of CEQA. If not, a cultural resources

survey would need to be conducted. The purpose of this investigation is to identify resources before they are affected by a proposed project and avoid the impact. If the impact is unavoidable, mitigation will be determined, as warranted, on a case-by-case basis.

For informational purposes, Figure 17 depicts zones of estimated archeological sensitivity in Monterey County and the TMDL project area (source: Monterey County 2007 General Plan). Sensitivity zones are based on a number of considerations and assumptions. Some considerations include known archeological resources, such as well-founded observations by archeologists that stream courses and drainages are common historical locations of human occupation or use.

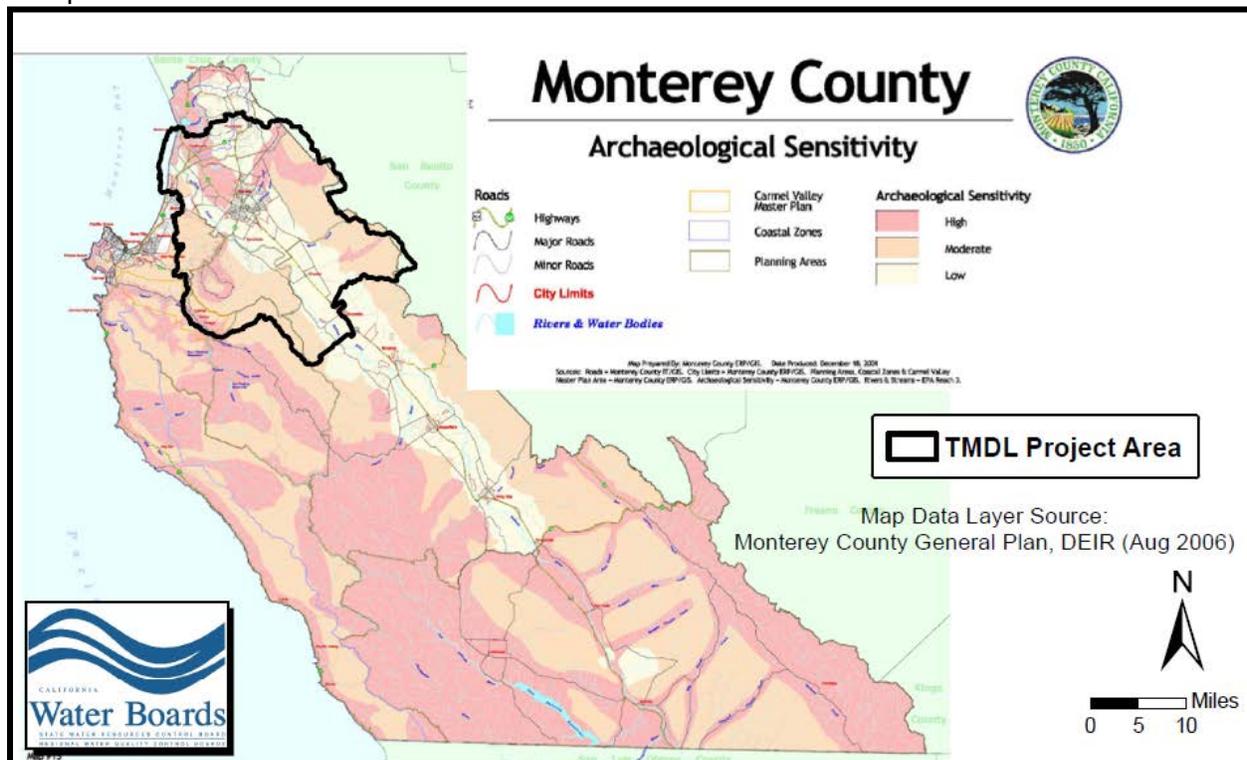


Figure 17. Estimated archeological sensitivity in Monterey County

(c) –Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Answer: No impact.

Discussion: Direct or indirect destruction of a unique paleontological resource or site or unique geologic feature is not expected to result from the implementation of management practices identified in Section 5. Most of these compliance methods do not involve substantial or large-scale land disturbance to land that has not been disturbed previously (e.g., irrigated cropland or urban stormwater conveyance structures). However in cases where the installation of structural management practices may involve excavation activities of land that has not been previously disturbed, a trained professional may need to conduct an investigation of paleontological resources.

In addition, paleontological sites are located in the mountains around the watershed and not in proximity of impaired waters in the valley, where implementation of management practices

would occur. Figure 18 depicts the approximate locations of paleontological sites considered by paleontologists to have outstanding scientific value in vicinity of the TMDL (source Monterey County 2007 General Plan).

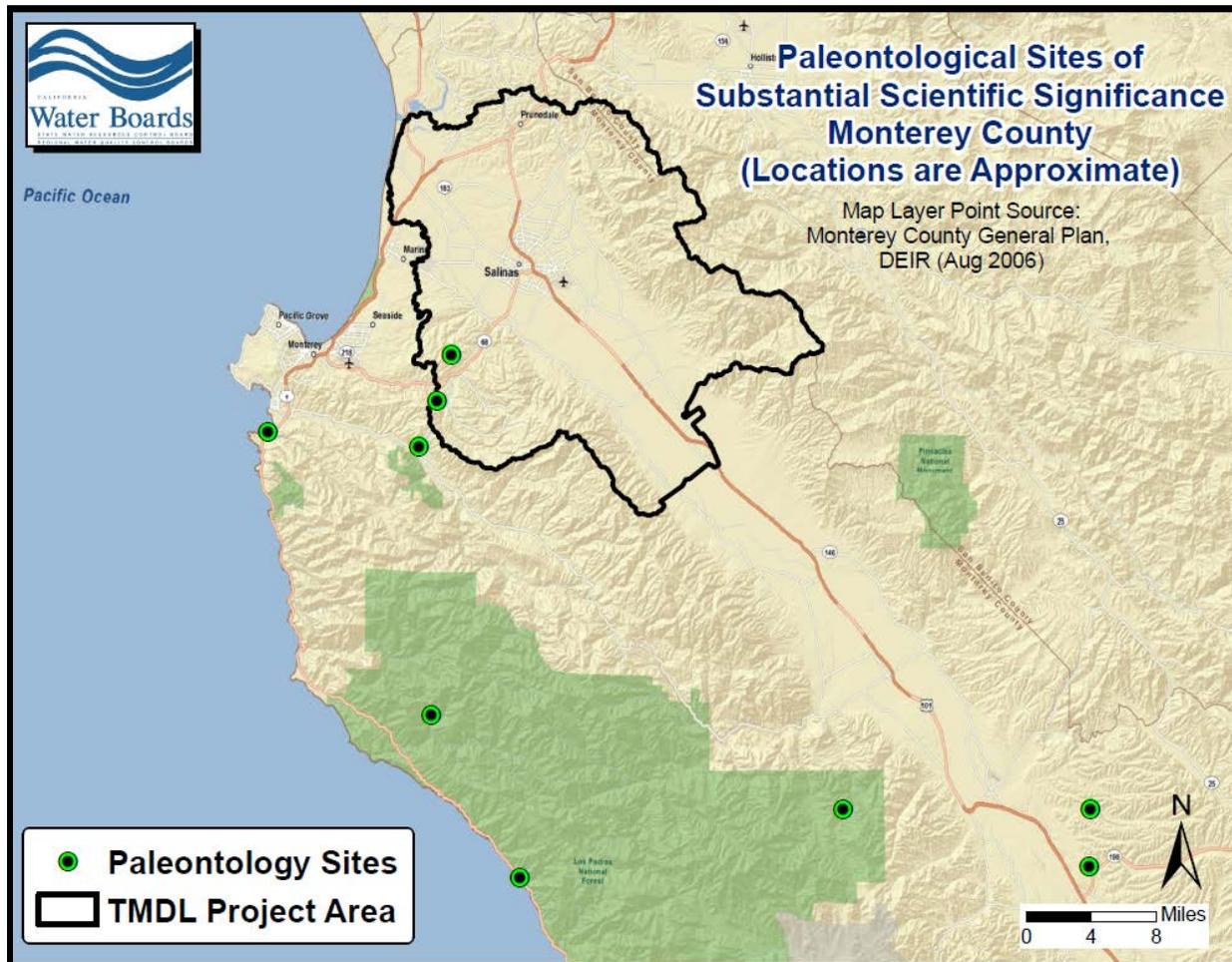


Figure 18. Paleontological resources in Monterey County

(d) –Disturb any human remains, including those interred outside of formal cemeteries?

Answer: No impact

Staff concludes that management practices identified in Section 5 are not expected to disturb any human remains, including those interred outside of formal cemeteries. Most of these compliance methods do not involve substantial or large-scale land disturbance to land which has not been disturbed previously (e.g., irrigated cropland or urban stormwater conveyance structures). If installation does involve large scale excavation or land-disturbance activities on previously undisturbed land, or if the construction of a large scale infrastructure is to be conducted that could result in the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the steps identified in CEQA Section 15064.5(e) will be taken.

VI. GEOLOGY AND SOILS

Would the project:

(a) – Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
- ii. Strong seismic ground shaking
- iii. Seismic-related ground failure, including liquefaction?
- iv. Landslides?

Answer: No impact.

Discussion: The management practices identified in Section 5 will not expose people or structures to seismic or other geologic hazards. Although some of the mitigation measures involve excavation, they are not to such a depth or on such a slope, or at such a scale as to result in the ground failure and liquefaction conditions described in VI.(a) above, nor would the compliance methods substantially increase the risk of loss, injury or death of people or structures due to seismic activity above and beyond seismic risks that already exist.

To determine earthquake hazards, recent seismic activity of faults in the vicinity of the project area were evaluated. The Alquist-Priolo Earthquake Fault Zones Maps show active faults in California and around the TMDL project area, the active faults are the San Andreas Fault in southeastern Monterey County and faults to the north in Santa Cruz County. These active faults are outside the project area and it is not considered an active earthquake hazard risk area. With regard to seismic shaking hazard in the Salinas Valley which might result from the San Andreas Fault seismic activity located to the northeast, probabilistic estimates² of peak ground acceleration³ in alluvium of the Salinas Valley is substantially lower (46% to 54% lower) than peak ground shaking in alluvial areas to the northeast of the TMDL project area (see Figure 19. Probabilistic seismic hazards). Furthermore, the TMDL project area is located in a region that the U.S. Geological Survey has delineated as being at low risk for landslide incidence and susceptibility (data source: <http://www.nationalatlas.gov/mld/Isoverp.html>) – refer to Figure 20.

² See California Geological Survey – Seismic Shaking Hazards in California. Online linkage <http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html>

³ Defined as the fastest measured change in speed, for a particle at ground level that is moving horizontally because of an earthquake

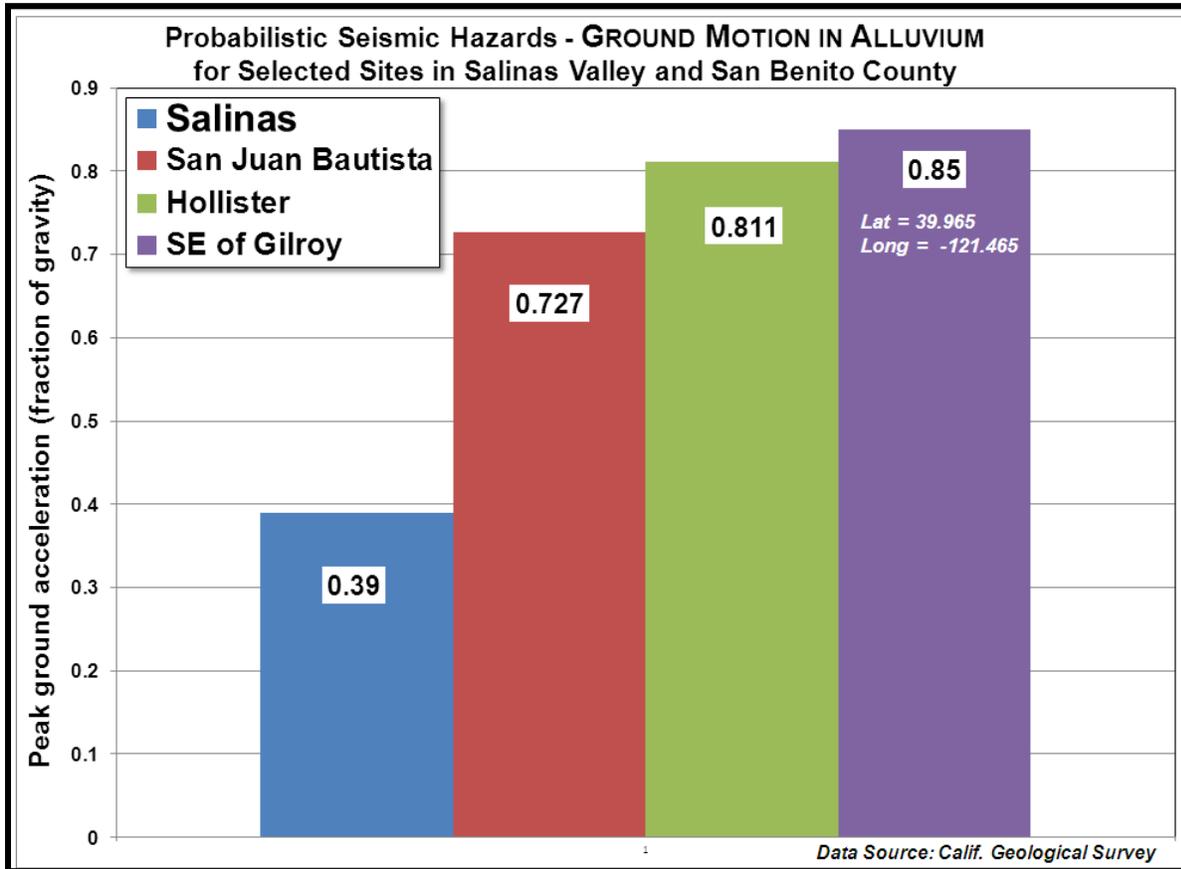


Figure 19. Probabilistic seismic hazards

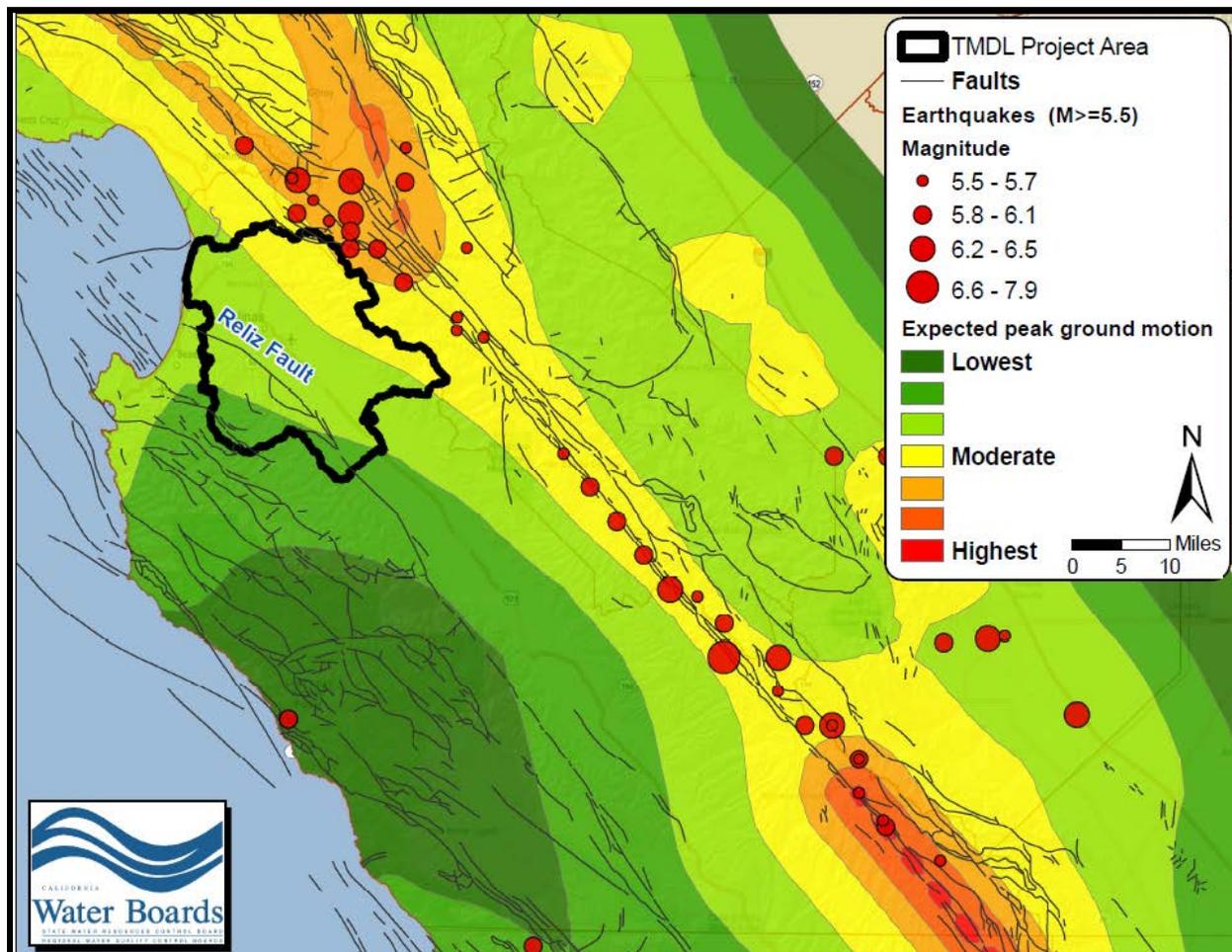


Figure 20. California historical earthquakes - Monterey and San Benito counties (1800 to 2000) and seismic risk (ground acceleration).

(b) – Result in substantial soil erosion or the loss of topsoil?

Answer: No impact.

Discussion: The TMDL addresses sediment toxicity and many of the management practices identified in Section 5. reduce soil erosion and loss of topsoil, therefore the TMDL should protect soil resources and there should be no impacts.

(c) – Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Answer: No impact.

Discussion: The management practices identified in Section 5 do not occur at such a scale as to cause a substantial, or potentially substantial risk to soil instability, landslides, subsidence, liquefaction, or collapse.

Although some implementation strategies could potentially occur below ground or involve land disturbance, they are not constructed at such a depth or on such a slope, or at such a scale as

to result or expose people and structures to substantial risk of ground failure, liquefaction conditions, or landslides. Furthermore, the TMDL project area is located in a region which the U.S. Geological Survey has delineated as being at low and moderate risk for landslide incidence and susceptibility (data source: <http://www.nationalatlas.gov/mld/lsoverp.html>) – refer to Figure 21.

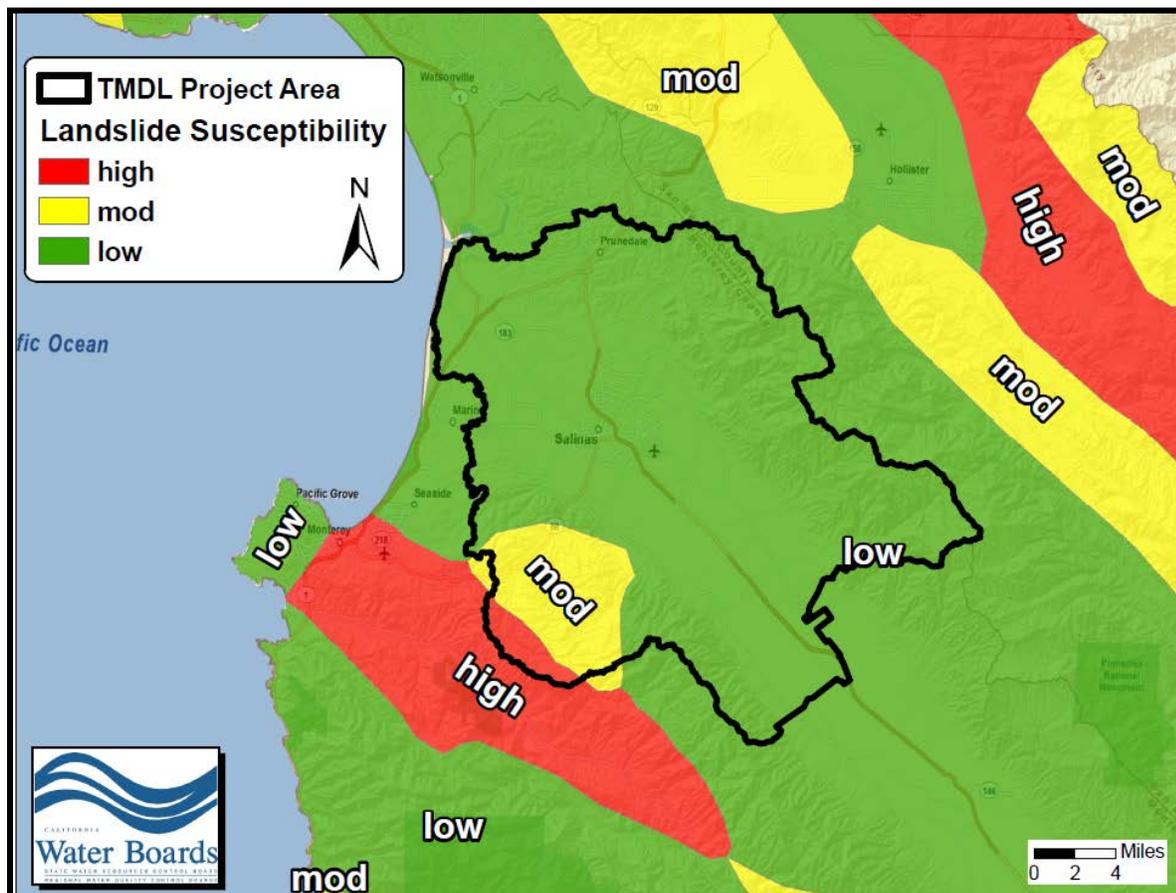


Figure 21. Landslide incidence and susceptibility

(d) – Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Answer: No impact.

Discussion: Implementation of this project should not result in building new structures intended for human occupancy.

(e) – Have soils incapable of adequately supporting the use of septic tanks or alternative waste-water disposal systems where sewers are not available for the disposal of waste water?

Answer: No impact.

Discussion: The TMDL will not increase development or housing that would need septic tanks or other waste-water disposal systems.

VII. GREENHOUSE GAS EMISSIONS

Would the project?

(a) – Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Answer: Less than significant

Discussion: Substantial, or potentially substantial, adverse changes to the environment due to generation of greenhouse gas emissions is not expected to result from the TMDL. The implementation of non-structural management practices identified in Section 5 such as irrigation management and IPM) do not involve energy consumption or energy generation in any significant way. Similarly, staff concludes that implementation of structural management practices would also not result in a substantial adverse change. There could be short term increases in traffic during the construction and installation of structural management practices. However, these activities would be the same as typical construction and maintenance activities in urbanized or rural areas.

(b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Answer: No impact.

Discussion: The management practices identified in Section 5 do not conflict with implementation of State's AB 32 Scoping Plan⁴ to reduce the greenhouse gases that cause climate change. Moreover the Scoping Plan and the TMDL both support efficient use of water, which results in reduced the consumption of energy and reductions in carbon emissions.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project?

(a) – Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

(b) – Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

(c) – Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

(d) – Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

(e) – For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

(f) – For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

(g) – Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

⁴ Calif. Air Resource Control Board, 2008. <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>

(h)– Expose people or structures to a significant risk of loss injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Answer to all of the above questions having to do with Hazards and Hazardous Materials: No impact.

Discussion: Staff determined that here are no management practices identified in Section 5 that would be expected to use or produce hazardous waste, or that would generate hazardous conditions. Therefore staff determined there would be no impact in terms of Hazards and Hazardous Materials.

IX. HYDROLOGY AND WATER QUALITY

Would the project:

(a) – Violate any water quality standards or waste discharge requirements?

Answer: Potentially significant impact.

Discussion: For the most part, the management practices identified in Section 5 should address the TMDL impairments and result in overall water quality improvement. For example, sediment basins and wetlands used to control pesticide runoff would also capture sediment and reduce nutrient loading. However, one practice of concern that could lead to violations of water quality standards is the discontinued use of pyrethroid pesticides. Eliminating the use of pyrethroids, would likely result in the increase use of other alternative insecticides. This has happened historically in the watershed. With increased regulation of chlorpyrifos and diazinon in the early 2000s, use of these pesticide dropped (refer to Figure 22), however there was a dramatic increase in the use of alternatives such as pyrethroids (refer to Figure 23), and more recently an increase in the use of imidacloprid (refer to Figure 24). The change in use away from chlorpyrifos and diazinon to pyrethroids has led to corresponding changes in water quality problems as documented in this TMDL. If pyrethroids are eliminated, new alternative pesticides could in turn cause new water quality problems. Examples of new alternative pesticides are fipronil and imidacloprid.

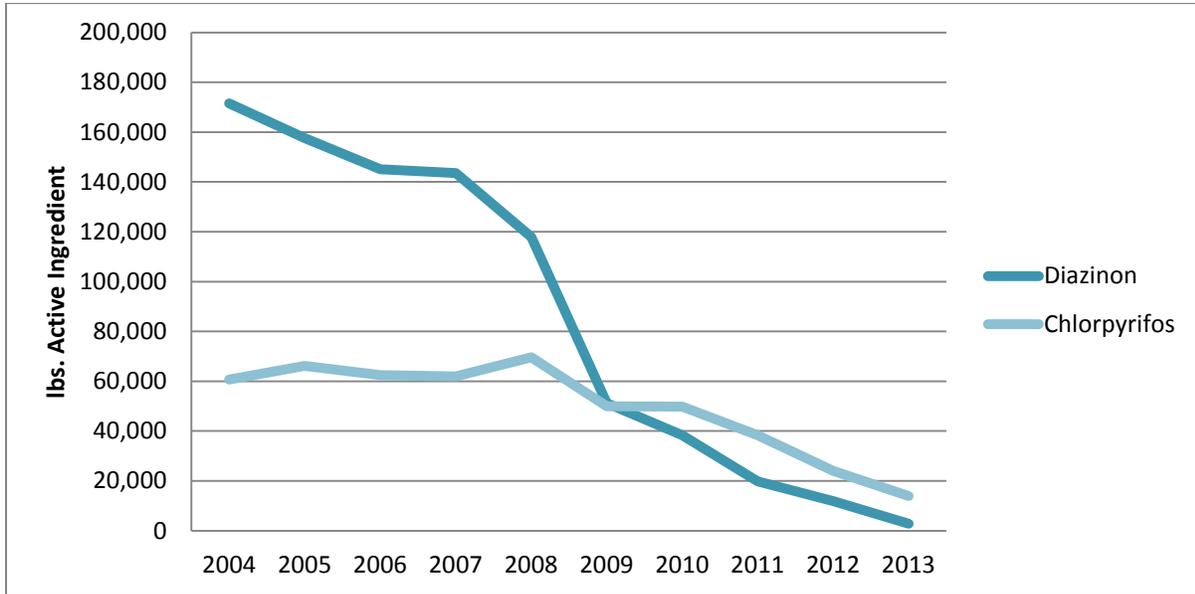


Figure 22. Trends in diazinon and chlorpyrifos use in Monterey County (Source: DPR)

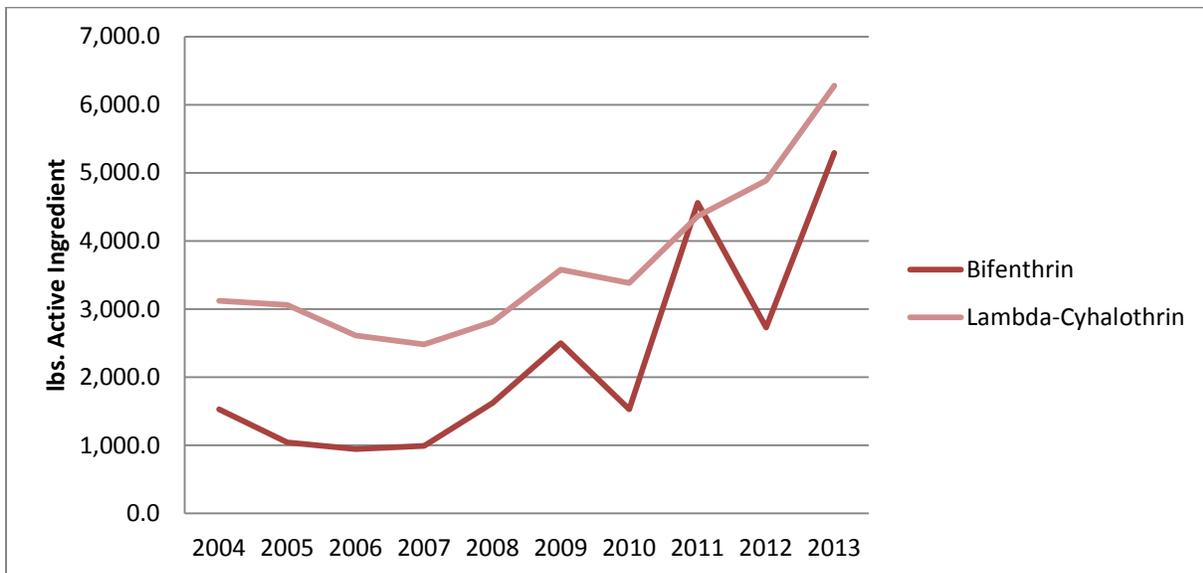


Figure 23. Trends in bifenthrin and lambda-cyhalothrin use (pyrethroids) in Monterey County (Source: DPR)

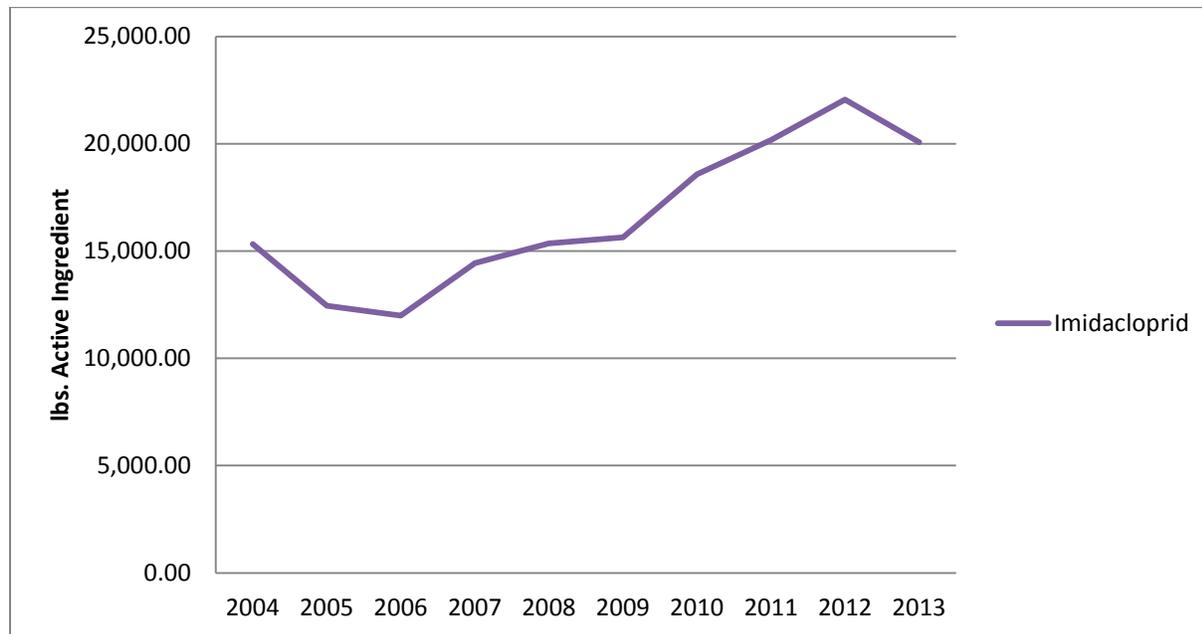


Figure 24. Trends in imidacloprid use (neonicotinoid) in Monterey County. (Source, DPR)

(b) – Substantially deplete ground water supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Answer: No Impact.

Discussion: The reasonably foreseeable methods should not result in an increase in groundwater pumping or interfere with recharge and in fact could improve groundwater supplies. Groundwater is a critical resource for irrigation in the watershed and the TMDL encourages irrigation efficiency management practices. The TMDL also encourages practices such as cover crops, vegetative ditches and basins that increase infiltration and groundwater recharge.

(c) – Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Answer: Less than significant impact.

Discussion: Reasonably foreseeable structural methods of compliance identified in Section 5 such as retention basins, constructed wetlands and associated construction activities could potentially cause an alteration of the existing drainage pattern locally. However, these methods of compliance are not expected to result in a substantial adverse change resulting in substantial erosion and siltation. In most cases, these compliance measures would occur at a geographically-small scale, and when installed with appropriately designed mitigation measures, would not be expected to result in substantial erosion or siltation on- or off-site. In addition, some of the compliance methods – particularly structural and vegetative systems for urban runoff management – are intended to approximate, restore, or mimic natural, pre-development

runoff and hydrograph patterns which is a desirable environmental result and ultimately beneficial to water quality, and erosion and siltation issues.

(d) – Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Answer: Less than significant with mitigation incorporation.

Discussion: Implementation of the management practices identified in Section 5 could potentially increase the risk of flooding. For example grassed waterways and channel vegetation could impede channel flows and cause water to flood adjacent lands. However, the potential for flooding could be mitigated by properly sizing channels and by implementing practices in the watershed such as cover crops, basins, and vegetative ditches that increase infiltration and reduce runoff into drainage systems.

(e) – Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Answer: No impact.

Discussion: It is unlikely that the management practices identified in Section 5 would constitute a substantial adverse change that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. In fact, many of the methods of compliance for urbanized areas with storm drainage systems are intended to approximate, restore, or mimic natural, pre-development runoff and hydrograph patterns which would be expected to actually reduce the risk of exceedances of stormwater drainage capacities. Further, the implementation of properly designed compliance measures would not result in increases in additional sources of polluted runoff; in fact, the methods of compliance are intended to reduce concentrations in polluted runoff.

(f) – Otherwise substantially degrade water quality?

Answer: Potentially significant impact.

Discussion: Please refer to the discussion above under the above subsection (a) for description of potentially significant impacts.

(g) – Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

(h) – Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Answer: Less than significant with mitigation incorporation.

Discussion: The major drainages in the lower Salinas River watershed are susceptible to flooding from some of the management practices describe in Section 5. Management practices such as grassed waterways, vegetative treatment systems, and constructed wetlands constructed in or along streams could impede or redirect flood flows. However, the design of structural management practice can incorporate design and management strategies such as vegetation mowing and debris clearing to mitigate flood risks. Additionally some of the practices such as grass waterways, sediment basins and cover crops increase infiltration, which reduces runoff and lowers flood risks.

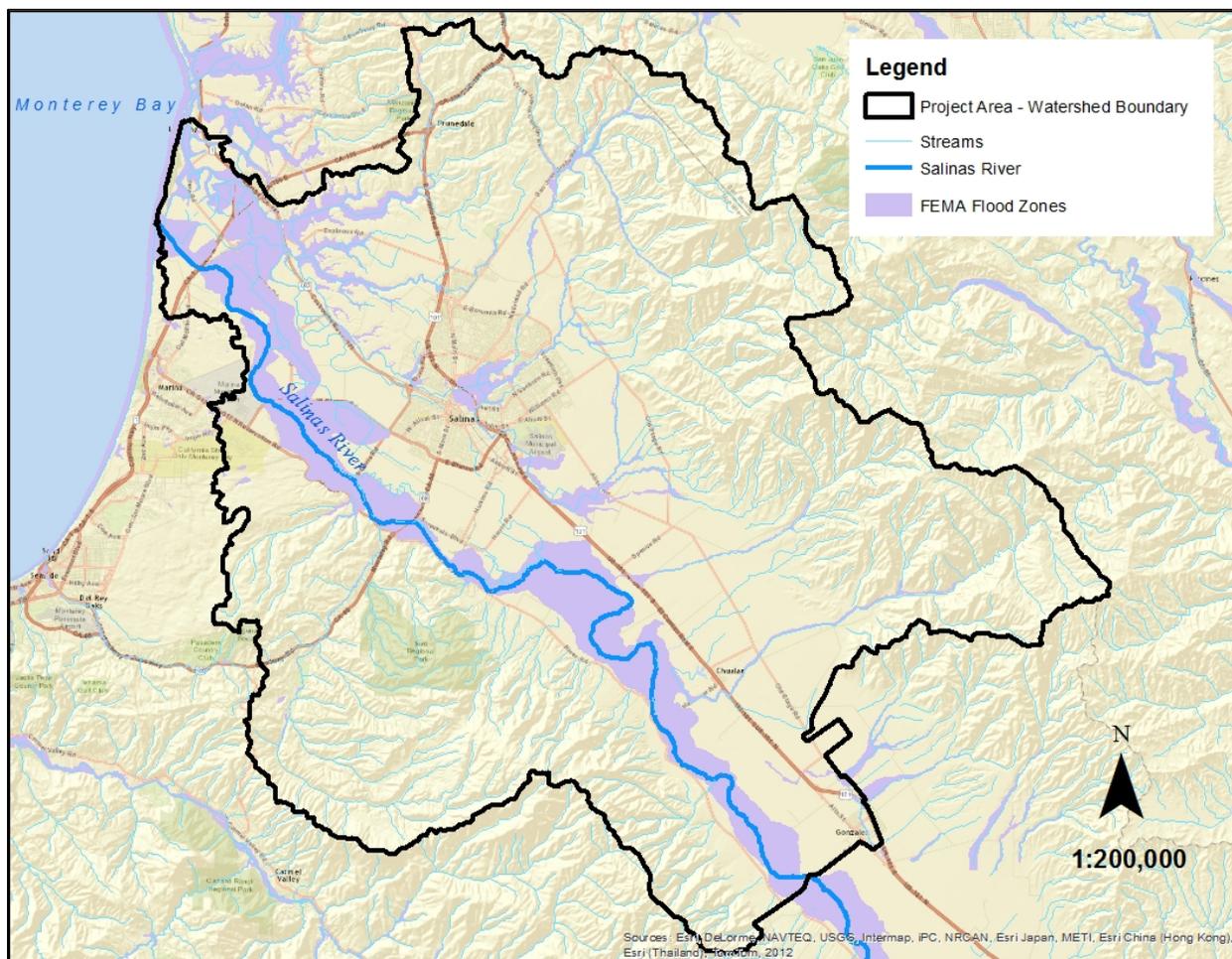


Figure 25. FEMA flood zones in the lower Salinas River watershed.

(i) – Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

(j) – Inundation by seiche, tsunami, or mudflow?

Answer: No impact.

Discussion: None of the management practices identified in Section 5. would cause inundation by seiche, tsunami, or mudflow.

X. LAND USE AND PLANNING

Would the project:

(a) – Physically divide an established community?

Answer: No impact.

Management practices identified in Section 5 that could potentially physically divide an established community would be physical measures of compliance, such as constructed wetlands, sediment basins and vegetative treatment systems. However, these management practices do not constitute the risk of a substantial, or potentially substantial, adverse change that would divide a community, because they would be dispersed, not contiguous, and would not be at a large geographic (community-sized) scale.

(b) – Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Answer: Potentially significant impact.

The agricultural element of the County of Monterey 2010 General Plan establishes policies to enhance and support long-term agricultural productivity and viability (Monterey County, 2010). TMDL implementation measures such as discontinuing the use of pyrethroid pesticides and construction practices that remove land from agricultural production would reduce crop yields and productive land and therefore conflict with the purpose of the county general plan.

(c) – Conflict with any applicable habitat conservation plan or natural community conservation plan?

Answer: No impact.

Based on available data there are no adopted Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) currently located in the TMDL project area; therefore there are no impacts to HCPs or NCCPs. The lower Salinas River watershed is included in the South-Central California Coast Steelhead recovery planning area, which extends from the Pajaro River south to just above the Santa Maria River and the San Luis Obispo/Santa Barbara County line (NMFS, 2013). The TMDL is not in conflict with the steelhead recovery plan and it supports the goals of the steelhead recovery plan. The Salinas River and the Gabilan Creek/Reclamation Canal watersheds are identified as key steelhead habitat watersheds in need of protection from agricultural runoff and the TMDL addresses this issue.

XI. MINERAL RESOURCES

Would the project:

(a) – 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?

(b) – 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?

Answer to all of the above questions having to do with Mineral Resources: No impact.

None of the management practices identified in Section 5 would result in the loss of availability of a locally-important 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.

XII. NOISE

Would the project result in:

(a) – Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Answer: Less than significant.

Discussion: The Monterey County general plan specifies compliance with land use compatibility noise exposure standards to assure a compatible noise level for various land uses. Thus, the foreseeable structural compliance methods identified in Section 5 would be expected to conform to land use compatibility noise standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

(b) – Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Answer: Less than significant.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of structural management practices that would result in the exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels. The implementation of some structural management practices may result in localized increased groundborne vibration or ground-borne noise levels. Such increased levels would likely be associated with heavy equipment operation associated with construction of management practices. These impacts would, however, be temporary and associated directly with the use of heavy equipment and consistent with current onsite agricultural operations. Therefore, staff concludes that the impact would be less than significant.

(c) – A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels currently existing, as noise generation is associated with the short term, temporary use of heavy equipment. Therefore, staff concludes there is no impact pertaining to permanent increases in ambient noise.

(d) – A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Answer: Less than significant

Discussion: Refer to above section XII(a).

(e) – For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Answer: Less than significant.

Discussion: Reasonably foreseeable management practices identified in Section 5. could be implemented within two miles of the Salinas Municipal Airport. However implementation is consistent with the county general plan, which has policies in place to avoid and minimize adverse aviation noise impacts.

(f) – For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of management practices that would likely be located within the vicinity of a private airstrip.

XIII. POPULATION AND HOUSING

Would the project:

(a) – Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

(b) – Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

(c) – Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

XIV. PUBLIC SERVICES

(a) – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

Answer to all of the above questions having to do with Public Services: No impact.

Discussion: None of the management practices identified in Section 5 would have an effect upon, or result in a need for new or altered fire protection services, schools, parks, or other public facilities.

XV. RECREATION

(a) – Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

(b) – Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Answer: No impact.

Discussion: None of the management practices identified in Section 5 would require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

XVI. TRANSPORTATION/TRAFFIC

Would the project:

(a) – Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Answer: Less than significant impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 would cause a substantial, or potentially substantial, adverse increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections). Construction of structural management practices would temporarily increase traffic. However due to the size and dispersal of such management practices, the impact would not be significant.

(b) – Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 exceed either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

(c) – Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of structural management practices that would result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

(d) – Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of structural management practices that would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses.

(e) – Result in inadequate emergency access?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of structural management practices that would affect emergency access.

(f) – Result in inadequate parking capacity?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of structural management practices that affect parking capacity.

(g) – Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 conflicts with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:

(a) – Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 would cause an exceedance of wastewater treatment requirements.

(b) – Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Answer: No Impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 would result in a wastewater treatment provider needing to expand existing treatment facilities.

(c) – Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Answer: Potentially significant impacts.

Discussion: The TMDL could result in the City of Salinas or the County of Monterey constructing new storm water drainage facilities to treat pesticides in runoff, reduce sediment, or to increase infiltration. The construction of new facilities (stormwater management practices) could have potentially significant impacts on air quality during construction. The excavation and grading of drainage basins and channels could be a potential short-term source of fine particulates matter in the air.

(d) – Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 would require new or expanded entitlements for water supplies. Instead management practices increase irrigation efficiency and infiltration of irrigation and rainfall, which could reduce water use.

(e) – Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Answer: No impact.

The implementation of the reasonably foreseeable compliance methods identified in Section 5 will not result in increased demand on wastewater treatment plant capacity.

(f) – Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Answer: No impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5. contemplate the use of structural management practices that would generate a significant source of solid waste, thus there are no significant adverse effects with respect to landfill permitted capacities.

(g) – Comply with federal, state, and local statutes and regulations related to solid waste?

Answer: No impact.

Discussion: Reasonably foreseeable compliance methods identified in Section 5 should generate little, if any, solid waste disposal nor would cause significant adverse effects with respect to compliance with federal, state, or local statutes related to solid waste disposal.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

(a) – Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Answer: No impact.

Discussion:

The purpose of the TMDLs is to provide for attainment of water quality standards and restoration of beneficial uses such as supporting aquatic and riparian habitats important to fish and wildlife. All of the compliance measures identified in this environmental analysis are designed to improve water quality from impaired waters. Attainment of water quality standards and restoration of designated beneficial uses are expected to result in a net benefit for the quality of the environment. As previously discussed, under Biological Resources- Category IV(a), there are endangered species in close proximity to potential sites and the construction of management practices could impact them. However any potential impacts to species would be mitigated and would not substantially reduce populations or reduce habitats.

(b) – Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Answer: Potentially significant impact.

Discussion: Cumulative impacts, defined in section 15355 of the CEQA Guidelines, refer to two or more individual effects, that when considered together, are considerable or that compound or increase other environmental impacts. Cumulative impact assessment must consider not only the impacts of the proposed TMDL implementation plan, but also the impacts from other Basin Plan Amendments, municipal, and private projects, which have occurred in the past, are presently occurring, and may occur in the future, in the TMDL project area during the period of implementation.

There are several TMDLs addressing water quality impairments in the lower Salinas River watershed and staff assessed the potential for these projects to cumulatively impact the environment. Approved TMDLs in the lower Salinas River watershed are:

- Total Maximum Daily Loads for Chlorpyrifos and Diazinon
- Total Maximum Daily Loads for Fecal Coliform
- Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate

Implementation of the TMDL in connection to the other approved TMDLs could have potentially significant impacts on the environment due to overlapping implementation schedules and milestones that could precipitate the implementation of management practices in the watershed. With multiple TMDLs being implemented in the watershed, there could be an increase in funding available for implementation which could accelerate activities to address management practices. Additionally, the approval of the TMDLs could increase regulatory activity in the watershed, which may lead to increased response by dischargers to implement management practices and subsequently more potential impacts to the environment. In particular, the nutrient and pesticide TMDLs note similar implementation alternatives for irrigated agriculture such as: storage basin, irrigation efficiency and vegetated systems.

Staff evaluated the cumulative impacts of these potential implementation alternatives on the environment and potential significant impacts are outlined below:

Hydrology and Water Quality– Implementation of the TMDL project and the TMDLs for Chlorpyrifos and Diazinon could result in an increased use of alternative pesticides and an increase in associated water quality problems.

Utilities and Service Systems – Implementation of the TMDL project and approved TMDLs could result in the construction of new storm water drainage systems management practices such as regional woodchip bioreactors and wetland treatment systems that would treat both nutrients and pesticides in runoff.

(c) – Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Answer: Less than significant impact.

Discussion: The goal of the proposed TMDL and associated actions are intended to improve long term water quality by providing a program designed to protect and restore beneficial uses of surface waters in the TMDL project area, which should result in reduced effects on humans from human use of water.

There is a potential risk of adverse effects on humans from changes in pesticide use from operations discontinuing the use of pesticides addressed in the TMDL and switching to alternatives that may have greater human health risk. Existing environmental programs to ensure worker and consumer safety from pesticides should be adequate to render potential impacts to less than significant.

Pyrethroid pesticides are an important tool for controlling mosquitos that can transmit vector-borne disease to humans such as West Nile virus and staff investigated whether TMDL implementation management practices could impact mosquito control. Staff discussed mosquito control in the lower Salinas River watershed with Ken Kemme, a biologist and executive director of the Northern Salinas Valley Mosquito Abatement District. The purpose of the district is to protect public health from mosquitos and it covers the same general areas as the TMDL. Pyrethroids and specifically permethrin can be used for mosquito control but are rarely used by the district. The district uses the least toxic levels of pest control first .The key means of control used by the district are physical controls and public education and outreach. The physical control strategy is to control weeds in water courses and eliminate standing water around homes. The district does treat water courses with Bacillus thuringiensis, a natural biological pesticide and mineral oil to control larval mosquitos. If not controlled mosquitos can pose a serious health problem, however pyrethroids are not an important means of control in the watershed and implementation of management practices would not have substantial adverse effects on human beings.

8. STATEMENT OF OVERRIDING CONSIDERATIONS AND DETERMINATION

Pursuant to CEQA Guidelines section 15093 (Cal. Code. Regs., tit. 14., § 15093), the Central Coast Water Board hereby finds that the project's benefits override and outweigh its potential significant adverse impacts, for the reasons more fully set forth in the Staff Report and attachments thereto, including the CEQA Checklist and Analysis. Specific economic, social, and environmental benefits justify the adoption of this TMDL despite the project's potential significant adverse environmental impacts. The Central Coast Water Board has the authority and responsibility to regulate discharges of waste associated with the sources of pollution causing impairment to water quality. Many of those discharges have caused significant widespread degradation and/or pollution of surface waters as described in the TMDL Technical Project Report for TMDLs for Sediment Toxicity and Pyrethroids Pesticides in Sediment in the Lower Salinas River Watershed in Monterey County, California and associated reference materials. The TMDL would result in actions to restore the quality of surface waters and protect their beneficial uses. While some impacts could occur from the implementation of management practices to comply with the TMDL, the benefits, which include contributing to the present and future restoration of beneficial water uses, and reducing or eliminating pollution and contamination, warrant approval. Upon review of the environmental information generated for this TMDL, including the CEQA Checklist and Analysis (Attachment 3 of the Staff Report) and in view of the entire record supporting the need for the TMDL, the Central Coast Water Board determines that specific economic, legal, social, technological, environmental, and other

benefits of the TMDL outweigh the unavoidable adverse environmental effects, and that such adverse environmental effects are acceptable under the circumstances.

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