CALIFORNIA ENVIRONMENTAL QUALITY ACT CHECKLIST AND ANALYSIS

for

Total Maximum Daily Loads for Nitrogen and Phosphorus Compounds in Streams of the Franklin Creek Watershed, Santa Barbara County, California (Resolution No. R3-2018-0006)

A Proposed Amendment to the Water Quality Control Plan for the Central Coastal Basin

December 2017

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

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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 (title 40, Code of Federal Regulations [CFR], §130.6(c)(1), §130.7, California Water Code [CWC], §13242). TMDLs are the maximum amount of pollutants that a waterbody can receive and still achieve water quality standards. Franklin Creek is not achieving water quality standards due to nutrient related impairments (e.g., excessive nitrogen and phosphorus compounds). 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 nitrogen and phosphorus compounds in the Franklin Creek 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.

Pursuant to Public Resources Code (PRC) 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 (PRC, §21000 et seq.) requirements for preparing standard environmental documents (14 California Code of Regulations [CCR], §15251(g); 23 CCR, §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 CCR, §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 CCR]).

This TMDL project is for Franklin Creek which is one of three watersheds that drain into the Carpinteria Salt Marsh, located in southeastern Santa Barbara County. Figure 1 depicts the Carpinteria Salt Marsh watershed, its two named waterbodies, Franklin and Santa Monica Creeks, and several underground drainage conveyances (conduits) in the western portion of the watershed that transport water south, below U.S. Highway 101 and Southern Pacific Railroad, and ultimately into the salt marsh. The Franklin Creek TMDL project area is the easternmost watershed as shown in Figure 1.

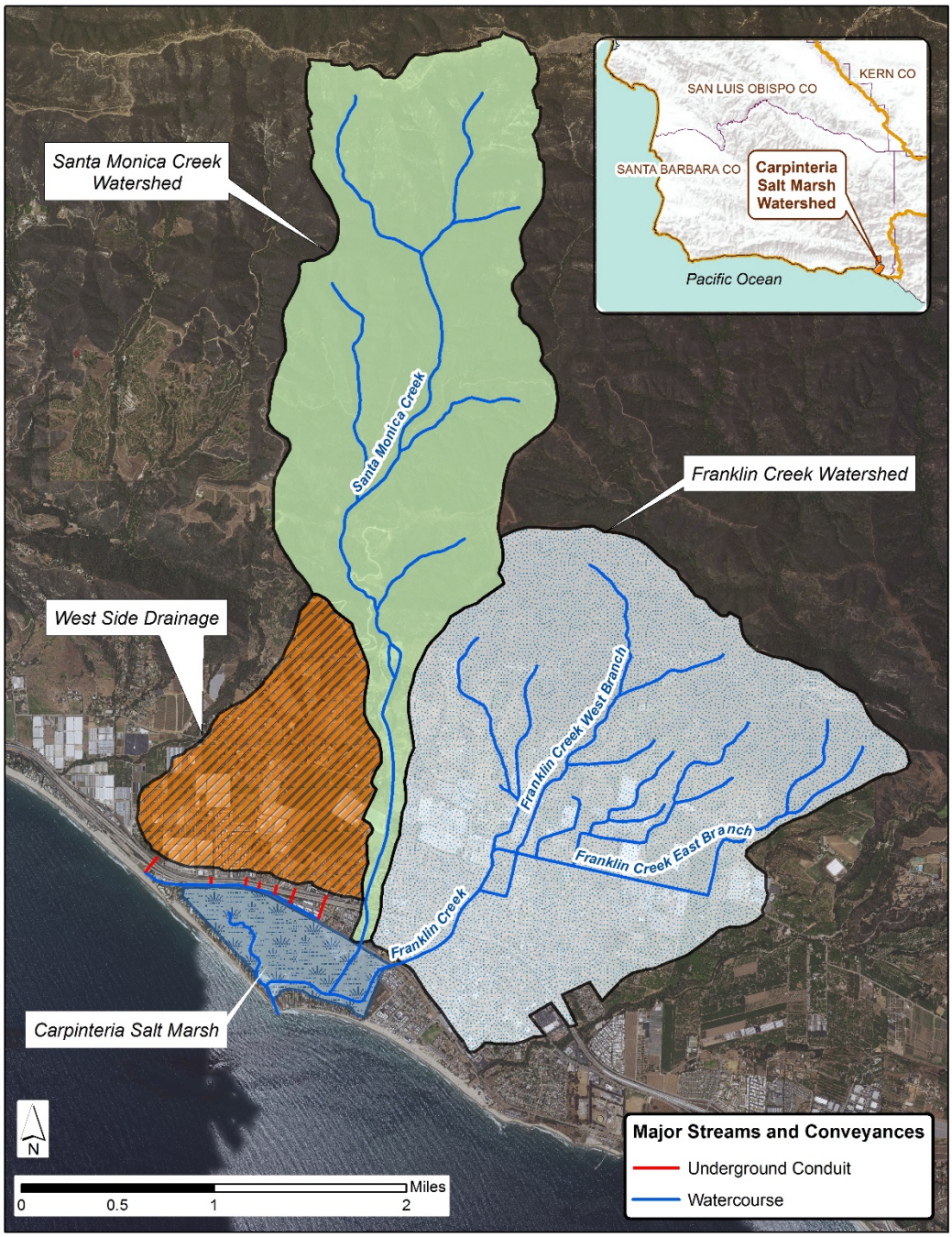


Figure 1. Drainages of the Carpinteria Salt Marsh watershed.
Spatial data source for watershed and streams: South Coast Watershed Map (Easterly Section), Santa Barbara County Flood Control and Water Conservation District, 1975.

The geographic scope of this TMDL (the project area) is the Franklin Creek watershed[1], which encompasses an area of approximately 5 square miles in southeastern Santa Barbara County as shown in Figures 1 and 2. The watershed has a peak elevation of 1,250 feet. Major tributaries to the main channel of Franklin Creek include the East Branch, West Branch, and High School Creek. The upper watershed is primarily National Forest Land (chaparral) and the

[1] The terms watershed and drainage are used synonymously throughout this document.

creek descends through lower lands comprised of orchards (avocado) agricultural (nurseries, greenhouses), and by urban areas. The Franklin Creek watershed lies within Carpinteria Hydrologic Subarea (315.34).

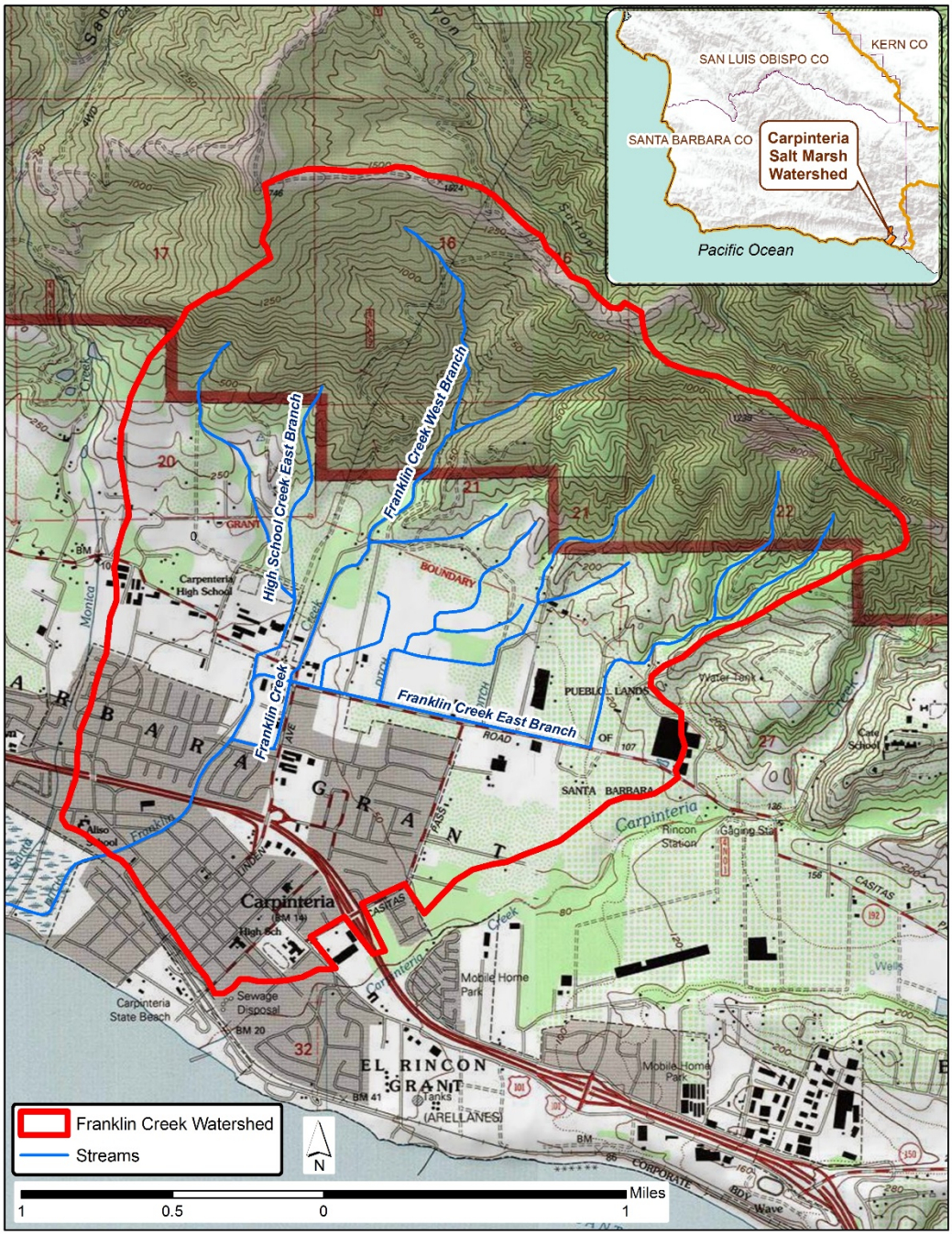


Figure 2. Franklin Creek watershed.

The TMDL addresses surface waters in the Franklin Creek watershed. Franklin Creek is currently contained on the federal Clean Water Act section 303(d) List of Impaired Waterbodies (303(d) List) due to excessive nitrate concentrations. Elevated levels of nitrate can degrade municipal and domestic water supply, groundwater, and can also impair freshwater aquatic habitat. Franklin Creek frequently exceeds the water quality objective for nitrate in drinking water and therefore does not support the municipal and domestic drinking water supply (MUN) beneficial uses[2].

The Basin Plan contains the following specific water quality objective that applies to the municipal and domestic drinking water supply (MUN) beneficial use:

> *Waters shall not contain concentrations of inorganic chemicals in excess of the maximum contaminant levels for primary drinking water standards specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Sections 64431 and 64433.2.*

The MUN water quality objective contained in California Code of Regulations, title 22, division 4, chapter 15, sections 64431 and 64433.2 is 45 mg/l nitrate as nitrate (NO_3 as NO_3) which is equivalent to 10 mg/l nitrate as nitrogen (NO_3 as N).

In addition, excessive nitrate concentrations may also impair the groundwater recharge (GWR) beneficial use. The Basin Plan explicitly requires that the designated GWR beneficial use of streams be maintained, in part, to protect the water quality of the underlying groundwater resources[3].

Water quality data also indicate that excessive nutrient (nitrogen and phosphorus compounds) inputs into Franklin Creek result in dissolved oxygen super-saturation and excessive algal biomass that are reflective of biostimulatory conditions. The Basin Plan has a narrative water quality objective for biostimulatory substances (see text below), but the Central Coast Water Board does not currently have recognized numeric water quality targets to measure nutrient-related water quality standards attainment for aquatic habitat beneficial uses. The nutrient related impairments in Franklin Creek are based on exceedances of general narrative objectives in the Basin Plan.

> *<u>Biostimulatory Substances</u>: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.*

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 Franklin Creek watershed include:

- Municipal and Domestic Supply (MUN)

[2] "Beneficial uses" is a regulatory term which refers to the legally-protected current, potential, or future designated uses of the waterbody. The Water Board is required by law to protect all designated beneficial uses.

[3] See Basin Plan, chapter 2 Beneficial Use Definitions, section 2.2.5, page 8.

- Agricultural Supply (AGR)
- Groundwater 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)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Biological Habitat of Special Significance (BIOL)
- Freshwater Replenishment (FRSH)
- Commercial and Sport Fishing (COMM)

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, CWC, §13242) to address impaired waters listed on the Clean Water Act Section 303(d) List of Impaired Waters (303(d) List). Franklin Creek is identified on the 303(d) List as impaired for nitrate. During development of the TMDLs, additional impairments were identified for biostimulatory substances that are included in the project.

Table 1. Waterbodies identified as impaired for nitrate and biostimulatory substances.

Waterbody	Waterbody Identification (WBID) [1]	303(d) Listed Pollutant	Additional Impairments [2]
Franklin Creek	CAR315340201999022513435 7	Nitrate	Biostimulatory substances

[1] State Water Resources Control Board Waterbody ID.
[2] Additional impairments are exceedances of water quality objectives in waterbodies identified during TMDL development and subsequent to the most recent 2014 303(d) listing cycle.

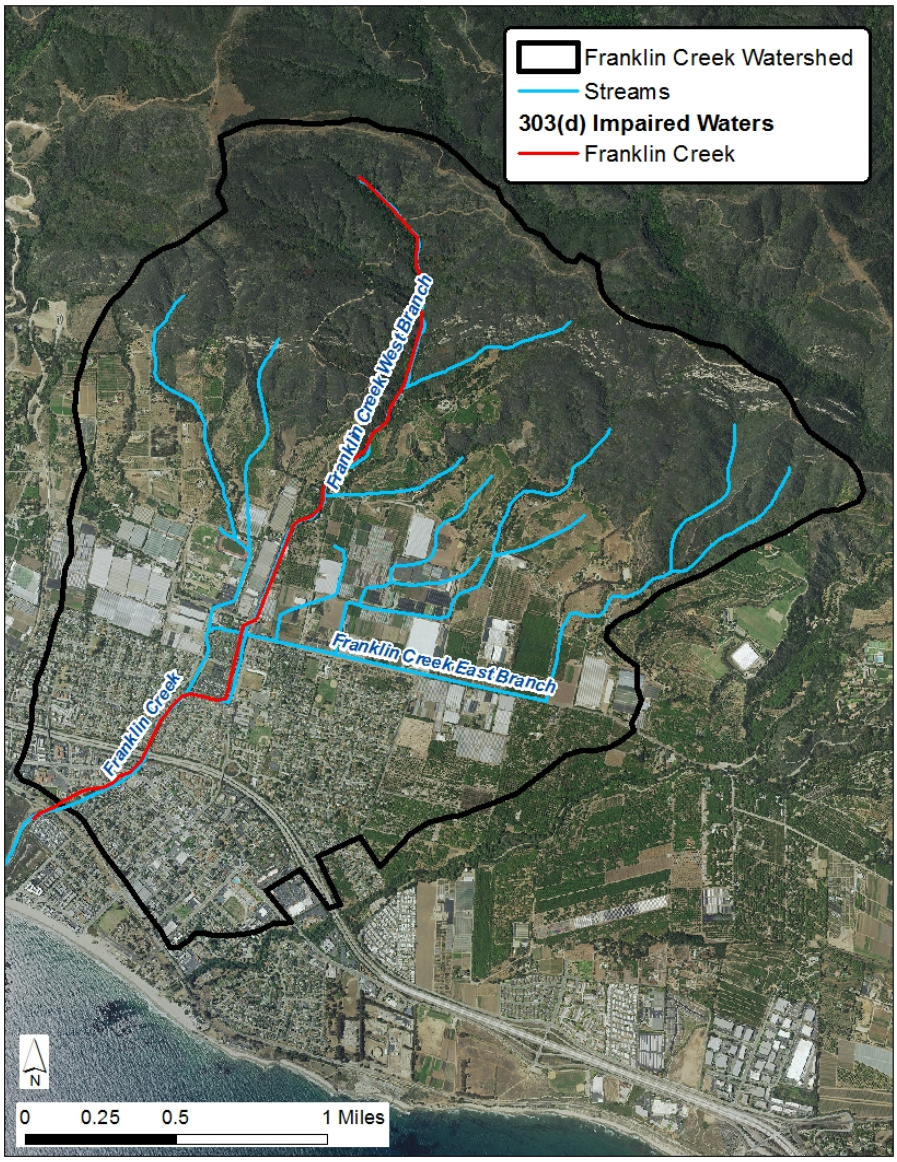


Figure 3. Map of impaired waters in the Franklin Creek watershed.

The TMDL includes an analysis of pollution sources in the Franklin Creek watershed and staff concluded that nitrate is a major source of biostimulatory substances. Nitrate is contained in fertilizers that are applied to agricultural and non-agricultural crops. Major agricultural crops grown in the Franklin Creek watershed include avocado, citrus, cut flowers, and nursery stock. In urban areas fertilizers are commercially applied on lawns, gardens, and various landscaped areas. They are also readily available as consumer home and garden fertilizers. Land use in the Franklin Creek watershed is comprised of about 37% agricultural (orchards, vineyards, nurseries and greenhouses) and approximately 22% is urban or built-up lands.

This project establishes TMDLs for nitrogen and phosphorus compounds. The TMDL assigns waste load allocations to point sources (municipal stormwater), 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 existing City of Carpinteria and County of Santa Barbara's Municipal Separate Storm Sewer System (MS4)

permits. Load allocations will be implemented through existing regulatory conditions as contained in the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated lands (Agriculture Order).

These TMDLs propose final waste load allocations and load allocations that are to be attained by 25 years after the TMDL is approved by the Office of Administrative Law (OAL). To assess progress towards achieving the final allocations, Central Coast Water Board staff is proposing that some allocations be attained sooner than others. Nitrate allocations protective of the MUN beneficial use shall be attained in 10 years, wet-season total nitrogen and total phosphate allocations protective of biostimulatory substances shall be attained in 15 years, and the more stringent dry-season total nitrate and orthophosphate allocations protective of biostimulatory substances shall be attained in 30 years.

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 (PRC, §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 (14 CCR, §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 documentation. 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 (PRC, §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 section 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 (PRC, §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 (PRC, §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 (PRC, §21159(d)). Similarly, the CEQA Checklist and Analysis does not engage in speculation or conjecture (PRC, §21159(a)). When

the CEQA analysis identifies a potentially significant environmental impact, the accompanying analysis identifies reasonably foreseeable feasible mitigation measures (PRC, §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 (PRC, §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 (14 CCR, §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 (14 CCR, §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 (PRC, §21068, §21100(d); 14 CCR, §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 (14 CCR, §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 based on thresholds that have been established by the lead

agency. The lead agency can also consider thresholds of significance adopted for other projects or by other agencies (14 CCR, §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 County of Santa Barbara Planning and Development Department as described in their *Environmental Thresholds and Guidelines Manual* (CSBPD, 2008).

3. ENVIRONMENTAL SETTING

This section describes the current environmental conditions of the Franklin Creek watershed project area. The regional geographic setting is described above in the project description section and the geographic and environmental settings are more extensively described in the TMDL Report. The following sections describe the natural and developed environments of the Franklin Creek watershed in the context of the TMDL.

Land Use: Staff used California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP, 2016) data to characterize land use in the Franklin Creek watershed project area as shown in Figure 4 and Table 2.

About 43 % of the land use within the Franklin Creek watershed is characterized as forested (chaparral) lands. The forested (chaparral) areas are located in the upper (northern) portion of the watershed and the FMMP data names this land use "Other Lands." Farmland makes up about 34% of the area in the Franklin Creek watershed while urban and built-up land comprises about 22% of the watershed area (see Figure 4 and Table 2).

Agriculture: The Franklin Creek watershed is a very productive agricultural area within Santa Barbara County. The crop production values for the Franklin Creek watershed are not available. However, in Santa Barbara 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, and 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, and field crops)

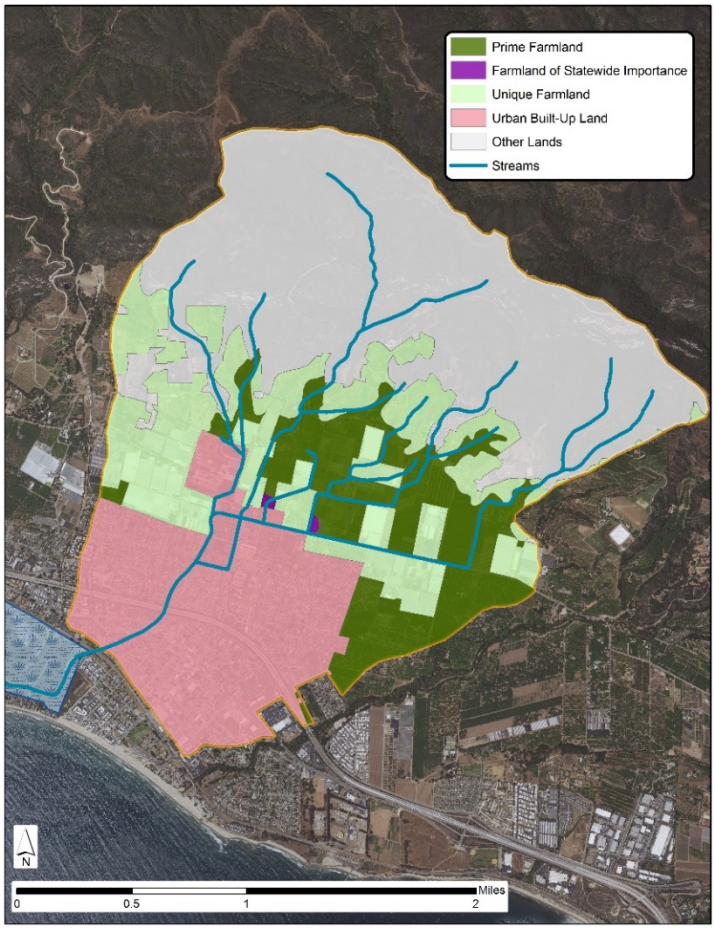
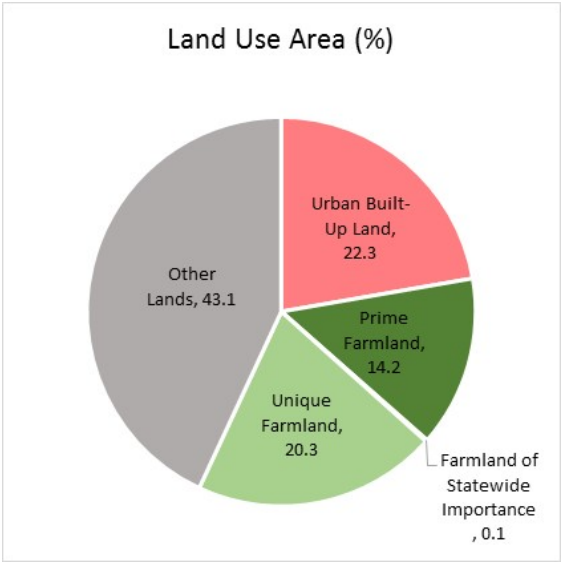


Figure 4. Land use and land cover.
Source: Farmland Mapping and Monitoring Program (FMMP, 2016)

Table 2. Land use area (acres and percent cover).

Land Use Name	Area (acres)
Urban Built-Up Land	635.4
Prime Farmland	405.9
Farmland of Statewide Importance	3.9
Unique Farmland	579.9
Other Lands	1228.5



Source: Farmland Mapping and Monitoring Program (FMMP, 2016).

Santa Barbara 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. Figure 5 depicts the boundaries of 111 parcels that are under Williamson Act contracts within the Franklin Creek watershed. Nearly all of the prime farmland (406 acres), unique farmland (580 acres), and farmland of statewide importance (4 acres) are contained as agricultural preserves under Williamson Act contracts.

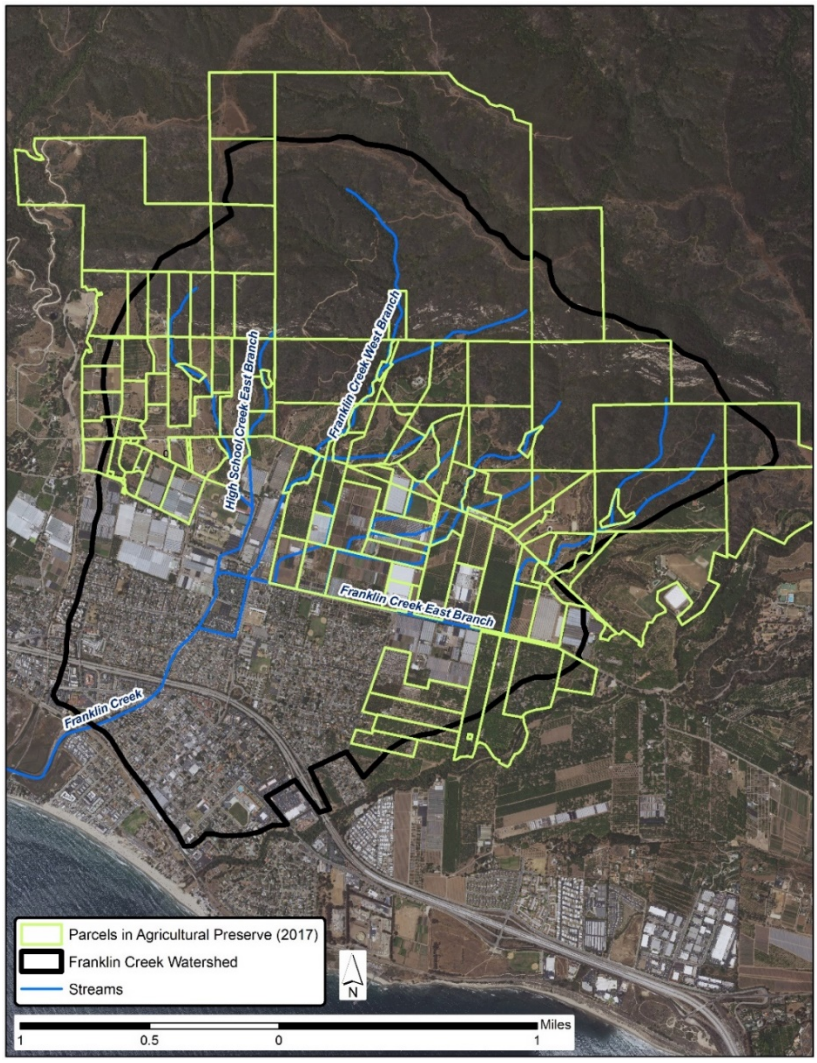


Figure 5. Santa Barbara County Williamson Act parcels.
Source: Santa Barbara County (2017).

Soils and Geology: Santa Barbara County soil surveys were compiled by the U.S. Department of Agriculture National Resources Conservation Service (NRCS) and is available online under the title of Soil Survey Geographic Database SSURGO (Soil Survey Staff, 2017). SSURGO has been updated with extensive soil attribute data, including surface texture and hydrologic soil groups.

Soil surface texture is shown in Figure 6. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for

example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

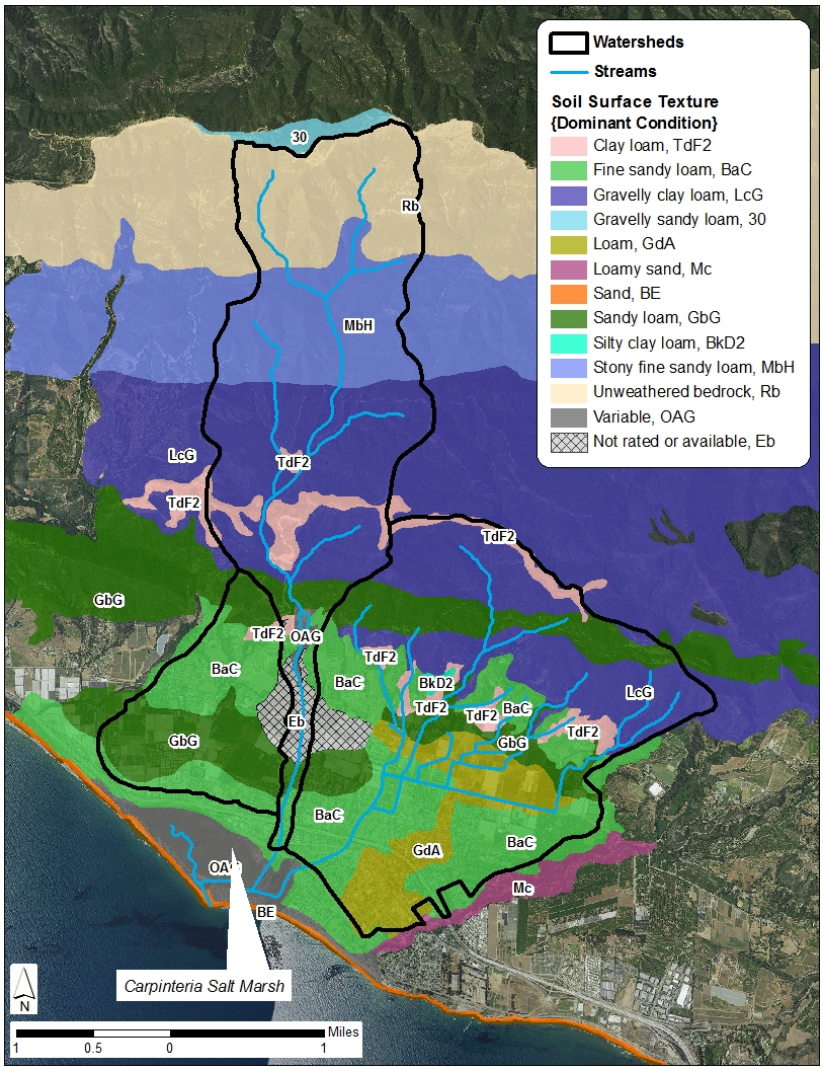
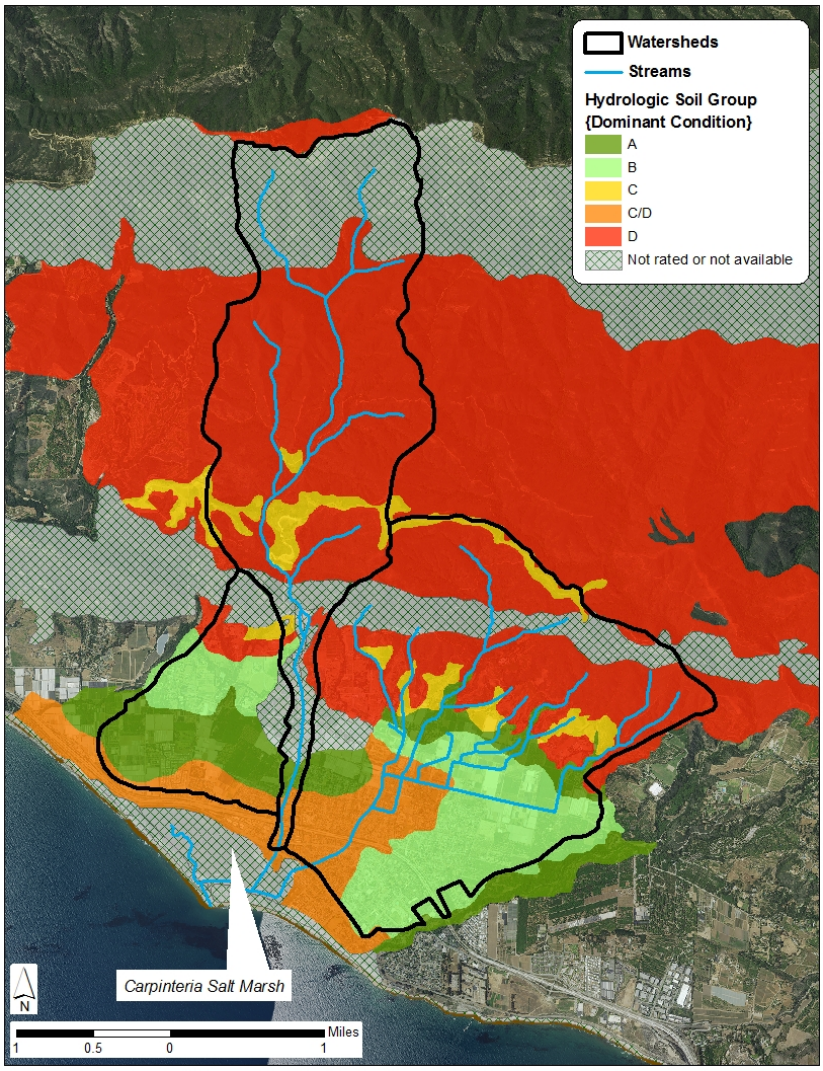


Figure 6. Soil surface texture.

Soil surface texture within the Franklin Creek watershed is primarily fine sandy loam (BaC) and loam (GdA).

Hydrologic soil groups are a soil attribute associated with a mapped soil unit, which indicates the soil's infiltration rate and potential for runoff. Figure 7 illustrates the distribution of hydrologic soil groups in the project area along with a tabular description of the soil group's hydrologic properties.



Hydrologic Soil Group Descriptions:	
A	Well-drained sand and gravel; high permeability
B	Moderate to well-drained; fine to moderately course texture; moderate permeability
C	Poor to moderately well-drained; moderately fine to fine texture; slow permeability
D	Poorly drained; clay soils, or shallow soils over nearly impervious layers(s)

Figure 7. Hydrologic soil groups in the Carpinteria Salt Marsh watershed.

As shown in Figure 7, upper portions of the watershed consist primarily of moderately and poorly drained soils (HSG groups C and D). Lower portions of the watershed contain moderate to well-drained soils (HSG group A and B), with the main portion of Franklin Creek within poor to moderately well-drained soils.

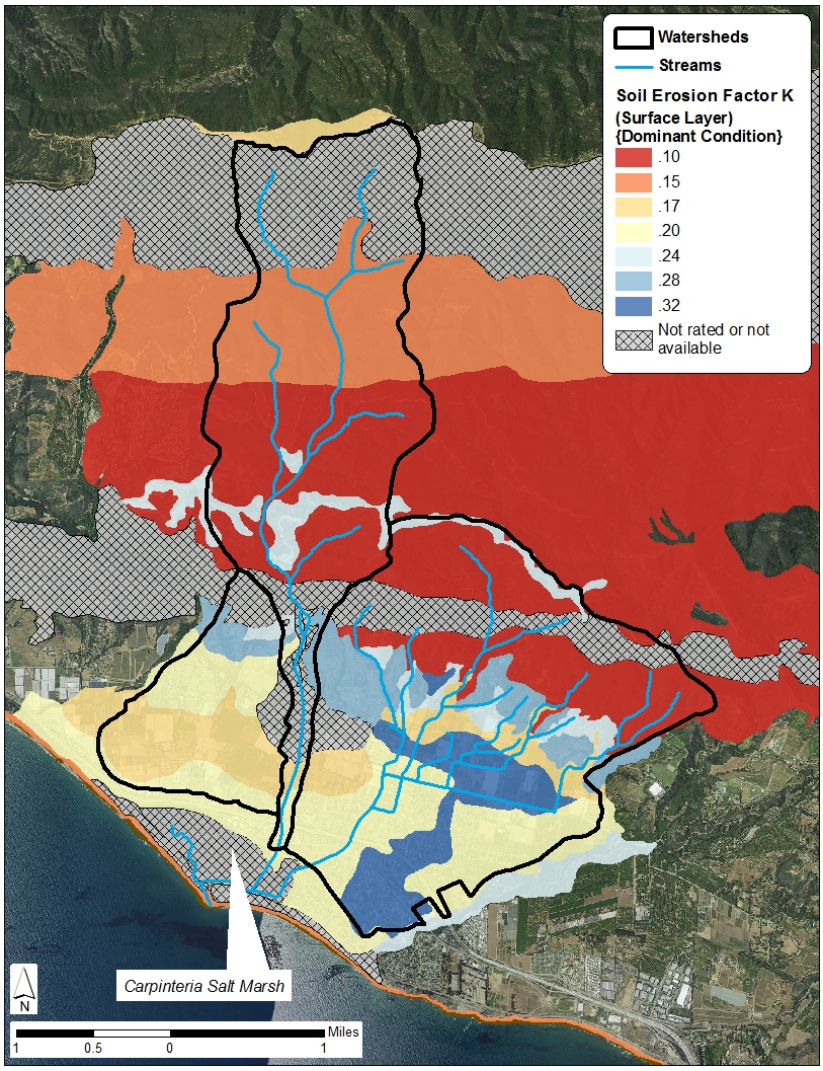


Figure 8. Soil erosion factor (K).

Erosion factor K, sometimes referred to as soil erodibility factor, indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and also on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. The information contained in Figure 8 shows the median soil erosion factor is approximately 0.24.

Geologic features of the Franklin Creek watershed are shown in Figure 9 and tabulated in Table 3.

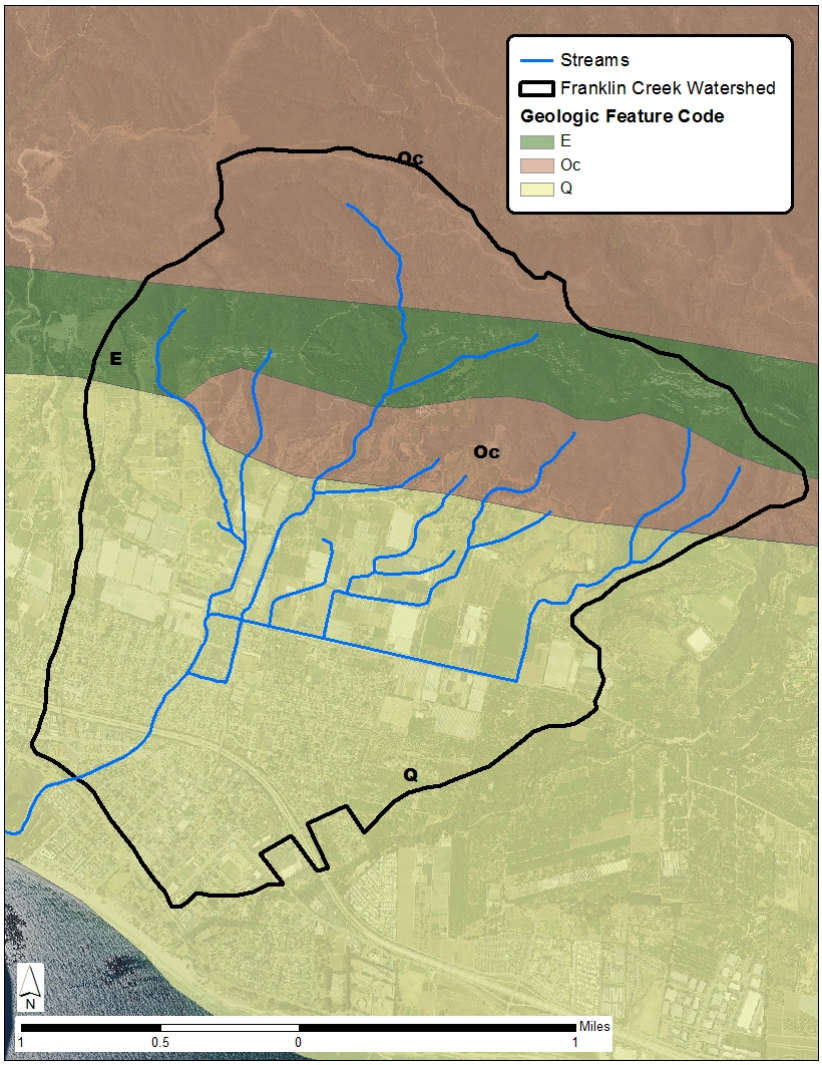


Figure 9. Geologic features.
Source: George J. Saucedo, et al., (2000). *GIS Data for the Geologic Map of California*, California Department of Conservation, Division of Mines and Geology, U.S. Geological Survey. Compiled by C.W. Jennings (1997).

Table 3. Description of geologic features.

Code	Rock Type	Age	Description
E	Marine Sedimentary Rocks	Eocene	Shale, sandstone, conglomerate, and minor limestone; mostly well consolidated.
Oc	Nonmarine (Continental) Sedimentary Rocks	Oligocene	Sandstone, shale, and conglomerate; mostly well consolidated.
Q	Marine and Nonmarine	Quaternary	Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine, but includes marine deposits near the coast.

Mineral Deposits: There are no known mineral resources within the Franklin Creek watershed. The only mineral resource known in the Carpinteria area, and hence the Franklin Creek TMDL project area, is oil mining and extraction which is limited to offshore drilling and extraction platforms, and onshore oil storage and processing facilities located near the coast (City of Carpinteria, 2003).

Biology (vegetation and wildlife): Most of the land within the Franklin Creek watershed has been developed for agricultural and urban uses, thereby constraining vegetation and wildlife diversity. Portions of the upper watershed are within the Los Padres National Forest and consist of forested lands (chaparral). Figure 10 shows the vegetation communities as reported by California Department of Forestry and Fire Protection.

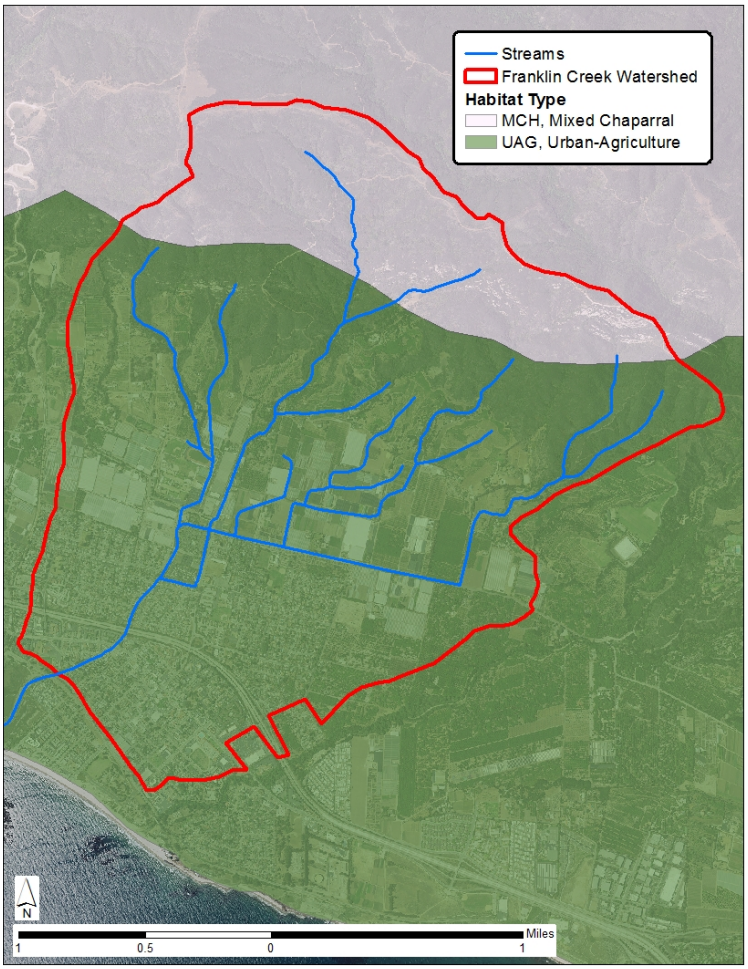


Figure 10. Map of plant communities
Source: California Department of Forestry and Fire Protection, 1980. Historic 1977 California Vegetation (CALVEG).

The California Department of Fish and Wildlife's California Natural Diversity Database tracks "special status species," which is a broad term used to refer to the list of "species at risk" or the "special animals" list. To be included on the "special status species" list, the animal or plant taxa must meet certain conditions indicating the species is rare, threatened, endangered, declining in population, sensitive, or otherwise meeting some level of conservation concern.

Table 4 tabulates the special status species known to occur within the Carpinteria Salt Marsh and Franklin Creek watersheds, based on information available from the California Department of Fish and Wildlife. It should be noted that the California Natural Diversity Database is a "positive detection" database, meaning that records of sensitive species only exist in the

database where these species were observed. Geographic areas in the database that have no records simply mean there is limited information there, or that no organized surveys have taken place there. One cannot conclude that there is less biological diversity in these places, simply due to lack of information. Therefore, these designations are not definitive and are to be supplemented with subsequent program and project level resource study and mapping.

Table 4. Rare, sensitive, threatened or endangered species within the vicinity of the TMDL project area.

SCIENTIFIC NAME	COMMON NAME	FEDERAL LEGAL STATUS	CALIF. LEGAL STATUS	STATE RANKING THREAT DESIGNATION
Quercus dumosa	Nuttall's scrub oak	None	None	S3
Atriplex coulteri	Coulter's saltbush	None	None	S1S2
Corynorhinus townsendii	Townsend's big-eared bat	None	None	S2
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None	None	S2
Rallus longirostris levipes	light-footed clapper rail	Endangered	Endangered	S1
Panoquina errans	wandering (=saltmarsh) skipper	None	None	S2
Southern Coastal Salt Marsh	Southern Coastal Salt Marsh	None	None	S2.1
Eucyclogobius newberryi	tidewater goby	Endangered	None	S3
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None	Endangered	S3
Charadrius alexandrinus nivosus	western snowy plover	Threatened	None	S2S3
Danaus plexippus pop. 1	Monarch – California overwintering population	None	None	S2S3
Chloropyron maritimum ssp. Maritimum	Salt marsh bird's-beak	Endangered	Endangered	S1
Calochortus fimbriatus	Late-flowered mariposa-lily	None	None	S3
Rana draytonii	California red-legged frog	Threatened	None	S2S3

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.

Air Quality: The Franklin Creek watershed is in a portion of the South Central Coast Air Basin that is under the jurisdiction of the Santa Barbara Air Pollution Control District (SBAPCD). Air quality is monitored and reported by the SBAPCD. The air quality is assessed by comparing monitoring data to federal and state government air quality standards that consist of the following parameters: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, sulfates, lead, hydrogen sulfide, vinyl chloride and visibility reducing particulates

(SBAPCD, 2013). The standards in Santa Barbara County were attained for all pollutants except ozone and particulate matter (PM10). Although the standards for ozone were exceeded, pollution levels have steadily decreased over the last two decades and air quality is improving (SBAPCD, 2013). Santa Barbara County meets the federal PM10 standard but exceeds the state standard.

Table 5. North Central Coast air basin air quality attainment status, 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
Nitrogen Dioxide (NO_2)	Attainment	Attainment/Unclassified
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment/Unclassified

Water Resources: The Carpinteria Valley Water District (CVWD) provides water services to customers within the Franklin Creek watershed. The CVWD boundary is shown in Figure 11.

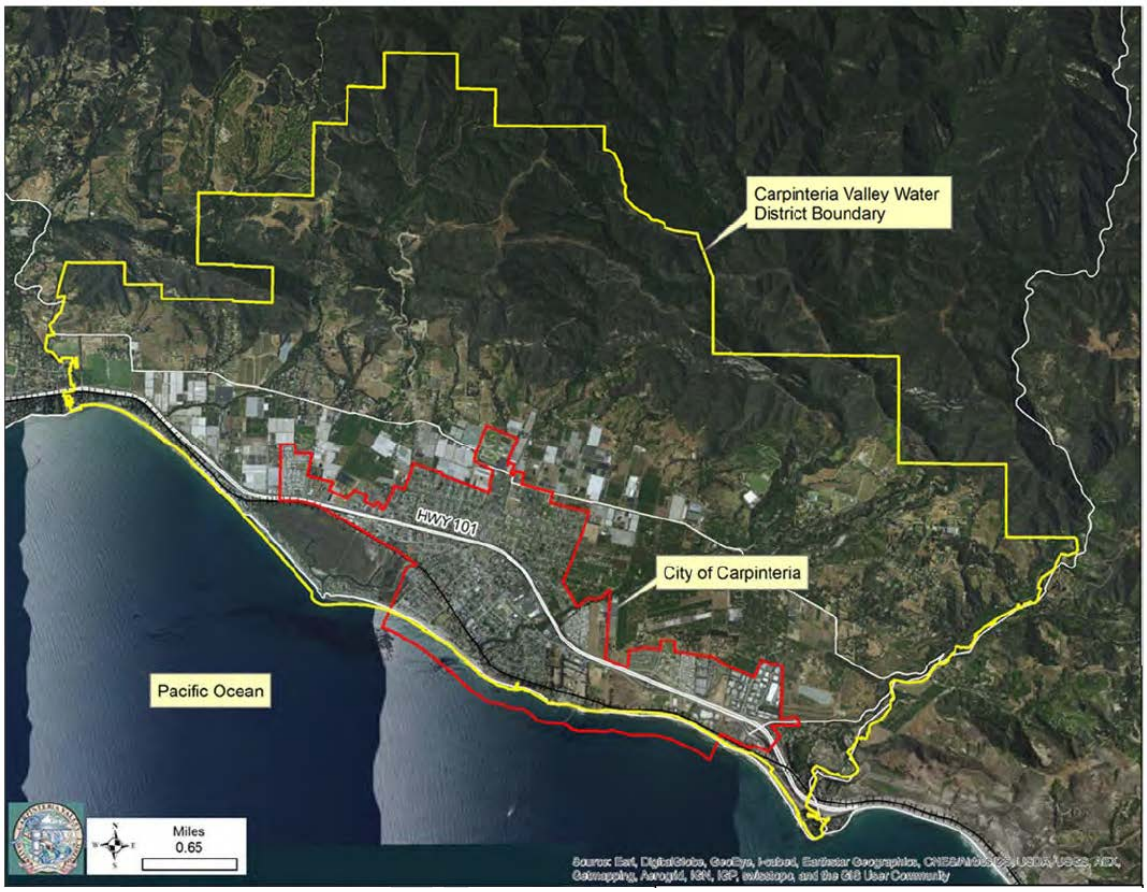


Figure 11. Carpinteria Valley Water District service area.
Source: Draft 2016 Agricultural Water Management Plan. Prepared for Carpinteria Valley Water District by Milner-Villa Consulting, January 2016.

The CVWD owns and operates five (5) municipal wells that provide most of the water within the district. The District also owns and operates three (3) potable water reservoirs with a combined storage capacity of 46.34 acre feet (AF). These reservoirs include Shepard Mesa (0.15 AF), Carpinteria (44.66 AF), and Gobernador (1.53 AF). Other available water resources include Lake Cachuma which is managed by the U.S. Bureau of Reclamation, and water imported via the State Water Project. Table 6 tabulates water resources.

Table 6. Current and total available water resources (acre-foot/year)

Water Resources	Actual 2015	Projected 2020	Projected 2025	Projected 2030	Projected 2035	Projected 2040
Groundwater (1)	2,456	1,700	1,700	1,700	1,700	1,700
USBR – Cachuma (2)	468	2,813	2,813	2,813	2,813	2,813
Department of Water Resources – SWP (3)	476	1,800	1,800	1,800	1,800	1,800
Recycled Water (4)	0	0	0	0	0	0
Desalination	0	0	0	0	0	0
Transfers or Exchanges In/Out	246	400	400	400	400	400
Other (5)	0	0	0	0	0	0
Total	**3,646**	**6,713**	**6,713**	**6,713**	**6,713**	**6,713**

Notes:
Source: CVWD.
(1) Current annual average CVWD groundwater pumping is approximately 1,500 AFY (1984-2015); CVWD anticipates that pumping would be increased up to the operational yield to offset demands; conservative estimate of long term average for CVWD pumping is approximately 1,700 AFY which is consistent with the basin safe yield (McDonald, 2016).
(2) Based on current maximum allocation of 2,813 AFY. However, the District understands that future deliveries will be less than the maximum allocation (McDonald, 2016).
(3) Based on current maximum allocation of 2,200 AFY (includes 200 AFY drought buffer program). However, the District understands that future deliveries will be less than the maximum allocation (McDonald, 2016). The projected value of 1,800 AF reflects the ID#1 exchange volume of 400 AF.
(4) CVWD is currently evaluating potential long-term use of recycled water (CVWD, 2015). However, conservative estimate assumes no recycled water available for direct or indirect reuse.
(5) CVWD has banked and utilized 1,000 AFY of State Water Project water (CVWD, 2011). CVWD anticipates utilizing banking programs again between 2015 and 2040.

Source: Draft 2016 Agricultural Water Management Plan. Prepared for Carpinteria Valley Water District by Milner-Villa Consulting, January 2016.

Table 7. Carpinteria water district water uses (2015).

Water Use Sector	Total Volume (AFY) (1,2)	Percent of Total Demands
Municipal and Commercial	1,495	41
Industrial	68	2
Agricultural	2,094	57
Total	**3,657**	**100**

Notes:
Source: CVWD.
(1) All values rounded.
(2) Total does not include system water losses.

Source: Draft 2016 Agricultural Water Management Plan. Prepared for Carpinteria Valley Water District by Milner-Villa Consulting, January 2016.

Table 8. Carpinteria groundwater basin total pumping 2011-2015.

Year	District Pumping (AFY)	Percentage of Total Pumping	Percentage of Annual Water Deliveries	Private Pumping (AFY)	Percentage of Total Pumping	Total Basin Pumping (AFY)
2011	1,365	36	34	2,428	64	3,793
2012	1,174	31	26	2,564	69	3,738
2013	312	9	6	3,060	91	3,372
2014	1,434	31	33	3,168	69	4,602
2015 (1)	2,456	49	67	2,598	51	5,054
Annual Average	**1,348**	**33**	**33**	**2,764**	**67**	**4,112**

Notes:
Source: CVWD.
(1) Private pumping for 2015 was not available at the present time. Estimated value based on most recent 10-year average (2005-2014).

Source: Draft 2016 Agricultural Water Management Plan. Prepared for Carpinteria Valley Water District by Milner-Villa Consulting, January 2016.

Wastewater Treatment: The Carpinteria Sanitary District provides wastewater treatment services within portions of the Franklin Creek watershed. The wastewater treatment facility is located outside the Franklin Creek watershed and wastewater is treated and discharged through an ocean outfall pipe into the ocean. Figure 12 shows the Carpinteria Sanitary District boundary and location of the wastewater treatment plant.

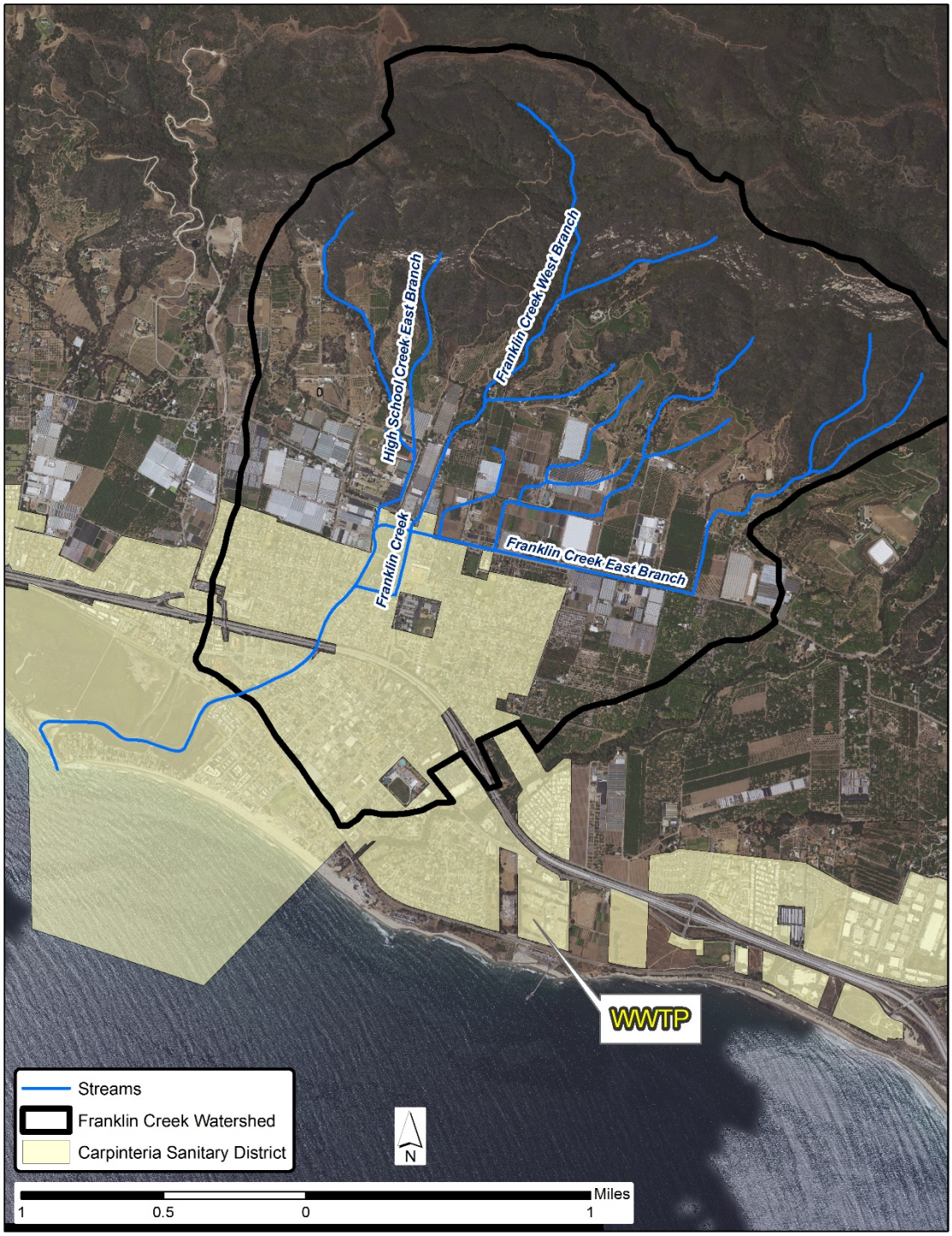


Figure 12. Areas served by Carpinteria Sanitary District and location of the wastewater treatment plant (WWTP).

Flood Control/Drainage: Franklin Creek has been channelized by the Santa Barbara County Flood Control and Water Conservation District, the U.S. Army Corps of Engineers, and the U.S. Soil Conservation Service. Flood hazard areas, as defined by the U.S. Federal Emergency Management Agency (FEMA), are shown in Figure 13.

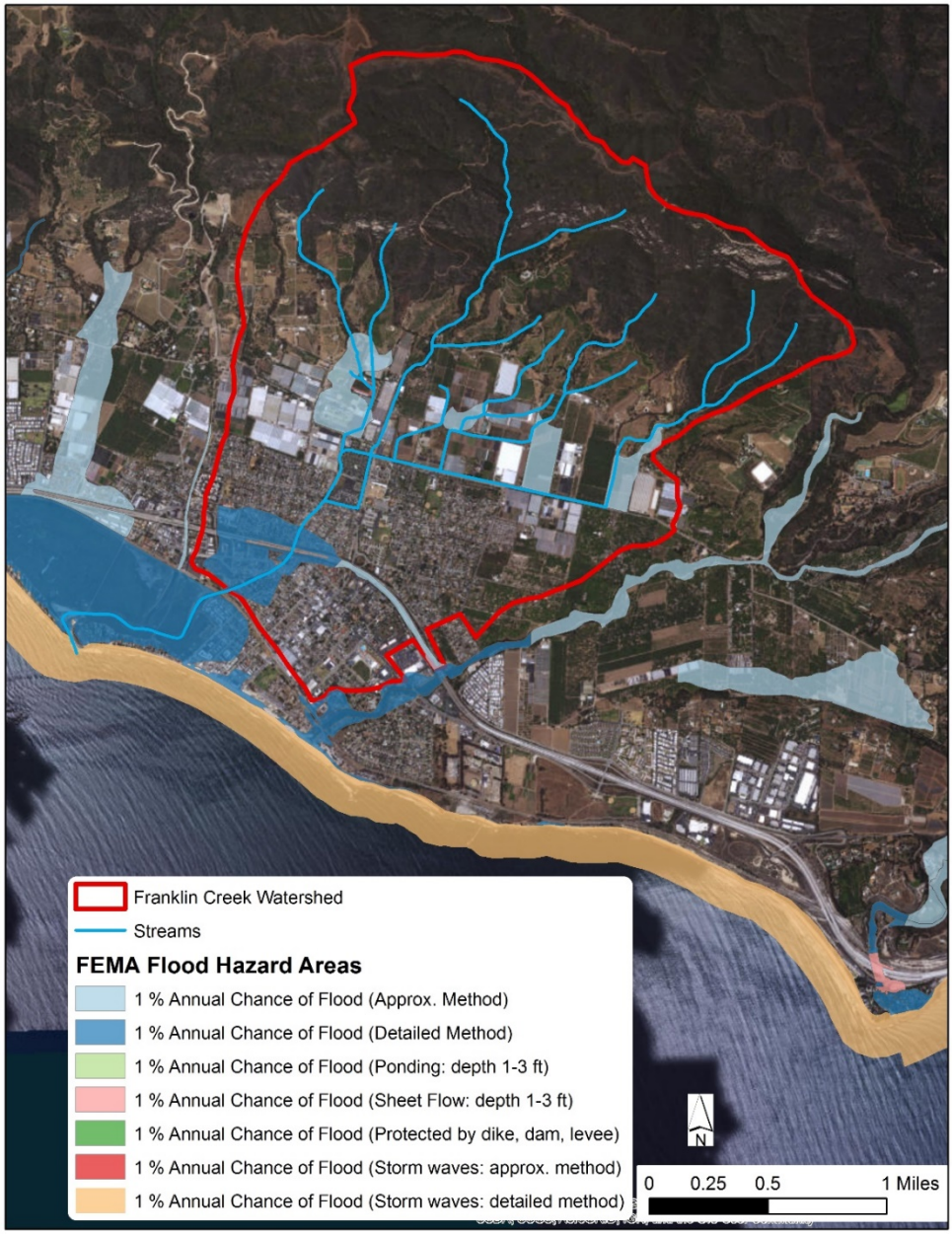


Figure 13. Flood hazard areas within the Franklin Creek watershed (FEMA, 2015).

Transportation/Traffic: Major transportation system components in the Franklin Creek watershed include:

- Regional Highways: U.S. Highway 101 is the major north and south route connecting the Los Angeles and San Francisco regions and it transects the project area.
- Arterial and Local Roads: Carpinteria Avenue and Foothill Road.
- Regional Transit: Santa Barbara Metropolitan Transit District and Ventura County Transportation Commission.
- Rail Services: Amtrak passenger service and Union Pacific railroad.

There are no airports in the vicinity of the Franklin Creek watershed project area.

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.) mass balance calculated TMDL alternative, and c.) TMDLs for nitrogen and phosphorus compounds (Resolution No. R3-2018-0006).

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 a No Action alternative, the Central Coast Water Board would not adopt the TMDLs nor require TMDL implementation or monitoring. 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 nitrogen compounds and orthophosphate would be incompatible with statutory requirements.

Under the No Action alternative the TMDL would rely on existing programs to address water quality impairments. Existing efforts would continue to implement management practices and monitor water quality if the TMDL was not adopted and it is likely that water quality would continue to improve. The efforts may not be directed towards the specific water quality impairments identified in the TMDL and progress towards meeting TMDL goals would not be monitored as efficiently as possible, and could leave designated beneficial uses surface waters unprotected or unrestored for a longer period of time.

Water quality impairments from nutrients to designated aquatic habitat beneficial uses are not specifically addressed in current Central Coast Water Board regulatory programs. This is in part because the Basin Plan has a narrative water quality objective for biostimulatory substances, but the Central Coast Water Board does not currently have recognized numeric water quality targets to measure nutrient-related water quality standards attainment for aquatic habitat beneficial uses in the Franklin Creek watershed. Additionally, USEPA, in part, relies on Central Coast Water Board efforts for their regulatory planning. Under federal regulations, stormwater

programs implementing the TMDLs would likely be the most effective mechanism to achieve point source pollution goals; however, current regulation of stormwater does not specifically address nutrient-related impacts to designated aquatic habitat beneficial uses in the river basin. Therefore, without TMDL implementation, it is less likely that attainment of water quality standards protective of aquatic habitat would be achieved. Further, regulations addressing biostimulatory impairments of waterbodies are relatively new and the proposed TMDLs will provide a means to assess effectiveness of the regulations.

Assuming the responsible parties do not take action on their own to address nutrient-related impairments of surface waters, it is less likely that some water quality standards will be attained, more likely that some designated beneficial uses will be left unprotected, and thus the TMDLs may not be achieved. Furthermore, beneficial uses of waterbodies in the TMDL project area will continue to be impaired and go unprotected.

b. Mass Based TMDL Alternative

The proposed TMDL (Resolution No. R3-2018-0006) relies on a concentration-based (i.e., allowable milligrams of pollutant per liter of water) water quality load approach. A mass-based TMDL alternative would achieve the TMDLs by distributing or "allocating" amongst the dischargers a total maximum mass-based daily load (e.g., pounds per day or kilograms per day of nitrogen compounds and orthophosphate) that the receiving waters could receive and still meet water quality standards. This approach would require first the determination of the amount of nutrients that the impaired surface waters could assimilate and achieve the water quality standard. Then the TMDL would allocate that mass of nutrients between the dischargers, assigning a waste load allocation to point sources and a load allocation to nonpoint sources and natural background sources. To accomplish this, long-term reliable measurements or predictions of daily stream flow need to be available throughout the year.

There is substantial uncertainty associated with mass-based load expressions that could be developed for streams of the Franklin Creek watershed. The mass-based loads, in many cases, would have to be based on limited amounts of instantaneous flow data, or National Hydrography Dataset Plus modeled flow data, and would thus reflect coarser temporal load representations, and not reliable daily load estimates. In the absence of reliable continuous, or daily flow data (i.e., U.S. Geological Survey gages or robust hydrologic modeling), there could be a high degree of error associated with estimated daily flows derived from limited amounts of instantaneous flows[4]. According to USEPA, the potential for error is particularly pronounced in arid areas, areas with few U.S. Geological Survey stream gages, and areas where flows are highly modified by human activities (e.g., impoundments, regulated flows, and irrigation return flows)[5]. Therefore, as noted previously, the proposed TMDLs and associated waste load allocations and load allocations are based on instantaneous concentration-based loads – this satisfies USEPA guidance to incorporate a daily time-step load[6]. In addition, concentration is

[4] U.S. Environmental Protection Agency, 2007. Options for Expression Daily Loads in TMDLs. June 22, 2007.

[5] *Ibid.*

[6] According to USEPA guidance (USEPA, 2007a), states should report TMDLs on a *daily* time step basis (e.g., allowable pounds of pollutant per *day*). Concentration-based TMDLs may be appropriate where there is only limited amounts of daily flow data, which thus limits the ability to calculate a reliable daily time-step allowable pollutant load in stream reaches. Therefore, according to USEPA (USEPA, 2007a) TMDLs based on instantaneous concentration-based loads can satisfy the federal guidance to incorporate a daily time-step pollutant load.

generally a more direct linkage to the protection of aquatic habitat, than annual or seasonal mass loads.

Staff evaluated a mass-load based approach during development of the TMDL and determined that, at this time, it would not be effective in implementing the TMDL goals due to the hydrology of streams within the Franklin Creek watershed, and due to the lack of reliable daily flow data. The flow within Franklin Creek is not perennial and flows are frequently dominated by irrigation return flows or are modified by other types of human land use activities. There is only a limited amount of daily stream flow gage data from U.S. Geological Survey stream gages, and existing instantaneous stream flow measurements are typically only collected on a once-per-month basis, or less frequently, at stream water quality monitoring sites.

Staff concludes that, at this time, there would be substantial and unacceptable uncertainty in developing mass-load based TMDLs for attaining water quality standards via mass-based TMDLs. Because of this significant uncertainty, concentration-based TMDLs are more appropriate for these TMDLs.

c. TMDLs for Nitrogen and Phosphorus Compounds (Resolution No. R3-2018-0006)

This alternative is based on the *Total Maximum Daily Loads Report for Nitrogen and Phosphorus Compounds in the Franklin Creek watershed (Draft Resolution No. R3-2018-0006*), or more concisely the "TMDL Report". This is the alternative presented and proposed for Central Coast Water Board consideration. The TMDL Report (attachment 2 to the Staff Report) provides a summary of nutrient and nutrient-related stream impairments in Franklin Creek and the federal Clean Water Act requirements to address the impairments. The TMDL develops numeric targets for nitrogen and phosphorus compounds, as well as for nutrient–response indicators[7] (chlorophyll *a*, dissolved oxygen, microcystins). Point and nonpoint sources of pollutants are also identified and assigned waste load allocations and load allocations, respectively, to meet the water quality objectives.

The following TMDLs and numeric targets included in the preferred alternative:

- Concentration-based TMDLs for nitrogen and phosphorus compounds
- Water quality targets for dissolved oxygen concentrations
- Water quality targets for dissolved oxygen median saturation
- Water quality targets for chlorophyll *a*
- Water quality targets for microcystins

The TMDL Report (attachment 2 to the Staff Report) describes existing and proposed implementation and monitoring programs to address impairments due to excessive nutrients. Implementation alternatives are described in section 5 and the environmental impacts of implementation are analyzed and discussed in sections 6 and 7 of this document.

As discussed in section 7, possible changes in irrigation and water management strategies, (as outlined in section 5 of this document,) could result in potentially significant adverse impacts to 1) aquatic habitat associated with a Biological Resources Checklist Category IV(a) (a potential substantial adverse effect on species identified as a candidate, sensitive, or special status

[7] Nutrient water quality criteria cannot be defined solely in terms of the concentrations of various nitrogen and phosphorus species, but should also include consideration of biological response to nutrients. It is these biological responses that correlate directly to impairment of beneficial uses (see Tetra Tech, Inc. 2004).

species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife[8] or U.S. Fish and Wildlife Service), and 2) Mandatory Findings of Significance Checklist Category XVIII(a) (potential to degrade the quality of the environment, substantially reduce the habitat of 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).

That said, staff concludes that adoption of the proposed TDMLs is both necessary and a long-term benefit to the environment and to water quality. Currently, the Basin Plan does not include a comprehensive implementation program designed to protect and restore the beneficial uses of surface waterbodies in the TMDL project area, nor does the Basin Plan contain numeric water quality metrics to assess the impacts of nutrient pollution on aquatic habitat. The proposed TMDL provides the framework for this comprehensive program. Staff acknowledges that the implementation of reasonably foreseeable compliance methods identified in Section 5 could result in potentially significant environmental impacts. However the Staff Report, the draft Basin Plan amendment, and the Environmental Checklist and associated analyses provide the necessary information pursuant to state law to conclude that the potential adverse 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

Staff concludes that the preferred alternative and most environmentally feasible option is adoption of *Total Maximum Daily Loads for Nitrogen and Phosphorus Compounds in the Franklin Creek watershed (Draft Resolution No. R3-2018-0006*) as contained in the TMDL Report. Staff concludes that adoption of the proposed TDMLs and Implementation Plan is both necessary and beneficial. Currently the Basin Plan does not include a comprehensive implementation program designed to protect and restore the beneficial uses of surface waterbodies in the TMDL project area. The TMDL implementation plan would provide the framework for this comprehensive program. The implementation of reasonably foreseeable compliance methods identified in Section 5 to comply with the proposed Implementation Plan will not result in significant adverse impacts that cannot be reduced to levels of insignificance with the implementation of thoughtfully designed and executed mitigation measures. Implementation of some of the identified compliance methods could result in temporary (short term) adverse impacts to the environment. Most of these impacts, however, can be reduced to levels of less than significant with mitigation, as described in this document.

The Staff Report, the draft Basin Plan amendment, and the Environmental Checklist and associated analysis provide the necessary information pursuant to state law to conclude that the proposed TMDLs, Implementation Plan, and the associated reasonably foreseeable methods of compliance will not have a significant adverse effect on the environment with the exception of *potentially* significant impacts to aquatic habitat associated with a Biological Resources Checklist Category IV(a) and Mandatory Findings of Significance Checklist Category XVIII(a). Staff made this determination based on best available information in an effort to fully inform the interested public and the decision makers of potential environmental impacts.

Although potentially significant adverse impacts to aquatic habitat were identified, it is not possible based on current information to know whether those potential impacts may be able to

[8] This agency was formerly known as the Department of Fish and Game.

be mitigated to less than significant levels; or alternatively if the impacts ultimately turn out to be less than significant. The Central Coast Water Board, when considering approval Basin Plan amendments will balance the economic, legal, social, technological, or other benefits of TMDL implementation against the potentially significant adverse effects when determining whether to approve the Basin Plan amendment, and has the authority to make a statement of overriding considerations, if it finds that the adverse environmental effects are acceptable given the identified benefits. In this case staff recommends that the Central Coast Water Board approve a statement of overriding consideration (as articulated in Section 8 of this report). The statement of overriding consideration finds that the benefits of the *Total Maximum Daily Loads for Nitrogen and Phosphorus Compounds in the Franklin Creek watershed (Draft Resolution No. R3-2018-0006*) override and outweigh the potential significant adverse impacts of these TMDLs, for the reasons more fully set forth in the staff report and attachments.

5. REASONABLY FORESEEABLE METHODS OF COMPLIANCE

Owners and operators of irrigated agricultural land must comply with the Conditional Waiver of Waste Discharge Requirements for Irrigated Lands (Order R3-2017-0002; the "Agricultural Order") and the Monitoring and Reporting Programs in accordance with Orders R3-2017-0002-01, R3-2017-0002-02, and R3-2017-0002-03, or their renewals or replacements, to meet load allocations and achieve the TMDLs. One of the requirements in these orders is to implement practices to protect water quality. Municipal MS4 entities area required to comply with (General Permit, Water Quality Order No. 2013-0001-DWA, NPDES CAS000004), or subsequent General Permits, and are required to implement controls to reduce discharges of pollutants and to achieve waste load allocations established in TMDLs. The following information outlines some generally accepted types of reasonably foreseeable management measures that implementing parties might consider.

The SWRCB, California Coastal Commission and other state agencies have identified management measures (MMs) to address agricultural sources of nutrient pollution that affect state waters. These are provided here as examples of management measures that can be employed to reduce nutrient pollution from nonpoint sources and from urban areas. These management measures are not provided here as examples of current or anticipated requirements, nor are they an exhaustive list of all possible, effective management measures. Staff utilized the State Water Resources Control Board's Nonpoint Source (NPS) Encyclopedia[9] for information and guidance on these foreseeable methods of compliance measures that could reasonably be used to implement the Franklin Creek nutrient TMDLs. The NPS Encyclopedia is an online reference guide designed to facilitate a basic understanding of NPS pollution control and to provide quick access to essential information from a variety of sources by providing direct hyperlinks to resources available on the World Wide Web. Information provided below is reproduced from the NPS Encyclopedia. The NPS Encyclopedia use the same designations for land use category and management practices similar to those identified in the State Water Resources Control Board's Plan for California's Nonpoint Source Pollution Control Program[10].

[9] State Water Resources Nonpoint Source (NPS) Encyclopedia. Online linkage: http://www.waterboards.ca.gov/water_issues/programs/nps/encyclopedia/

[10] Online linkage: http://www.waterboards.ca.gov/water_issues/programs/nps/protecting.shtml

a. Potential Compliance Measures for Nutrient Management Practices (Source Category: Irrigated Agriculture)

Owners and operators of irrigated agricultural land must comply with the Conditional Waiver of Waste Discharge Requirements for Irrigated Lands (Order R3-2017-0002; the "Agricultural Order") and the Monitoring and Reporting Programs in accordance with Orders R3-2017-0002-01, R3-2017-0002-02, and R3-2017-0002-03, or their renewals or replacements, to meet load allocations and achieve the TMDLs. One of the requirements in these orders is to implement practices to protect water quality.

The purpose of this management practice is to reduce the nutrient loss from agricultural lands, which occurs through edge-of-field runoff or leaching from the root zone The most effective way to manage nutrients is to develop a nutrient management plan (NMP) in accordance with U.S. Department of Agriculture-Natural Resources Conservation Service Standard 590[11]. The goals of a nutrient management plan are to: 1) apply nutrients at rates necessary to achieve realistic crop yields, 2) improve the timing of nutrient application, and 3) use agronomic crop production technology to increase nutrient use efficiency. Components of a NMP include the following:

- Farm and field maps with identified and labeled: acreage and type of crops, soil surveys, location of any environmental sensitive areas including any nearby waterbodies and endangered species habitats;
- Realistic yield expectations for the crop(s) to be grown based primarily on the producer's yield history, State Land Grant University yield expectations for the soil series, or United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soils-5 information for the soil series;
- A summary of the nutrient resources available to the producer, which (at a minimum) include (a) soil test results for pH, phosphorus, nitrogen, and potassium; (b) nutrient analysis of manure, sludge, mortality compost (birds, pigs, etc.), or effluent (if applicable); (c) nitrogen contribution to the soil from legumes grown in rotation (if applicable); and (d) other significant nutrient sources (e.g., irrigation water);
- An evaluation of the field limitations and development of appropriate buffer areas, based on environmental hazards or concerns such as (a) sinkholes, shallow soils over fractured bedrock, and soils with high leaching potential; (b) lands near or draining into surface water; (c) highly erodible soils; and (d) shallow aquifers;
- Use of the limiting nutrient concept to establish a mix of nutrient sources and requirements for the crop based on realistic yield expectations;
- Identification of timing and application methods for nutrients to (a) provide nutrients at rates necessary to achieve realistic yields, (b) reduce losses to the environment, and (c) avoid applications as much as possible to frozen soil and during periods of leaching or runoff;
- Provisions for the proper calibration and operation of nutrient application equipment; and
- Vegetated Treatment Systems are discussed in Management Measure 6C of this NPS Encyclopedia (see footnote 9).

[11] NRCS Conservation Practice Standard Code 590. Online Linkage: http://www.aces.edu/department/aawm/NutrientManagemental590.pdf

b. Potential Compliance Measures for Irrigation Water Management (Source Category: Irrigated Agriculture)

The purpose of this management measure is to reduce NPS pollution of surface and groundwaters caused by irrigation. Irrigation water should be applied in a manner that ensures efficient use and distribution of the water and minimizes runoff and soil erosion. Recommended practices include the following:

- Determining and controlling the rate, amount, and timing of irrigation water in a planned and efficient manner. This entails knowing the daily water use of the crop, the water-holding capacity of the soil, and the lower limit of soil moisture for each crop and soil. It is also important to measure the amount of water applied to the field.
- Controlling the manner and application of water to minimize water runoff and soil erosion. USDA NRCS-recommended irrigation systems include micro irrigation, sprinklers, surface and subsurface systems, and tailwater recovery systems.
- Designing irrigation water transport systems to eliminate as much water loss as possible.
- Lining irrigation channels to prevent seepage to groundwater.
- Using a pipeline and apparatus to convey water to the irrigation system.
- Using a structure that controls the rate and timing of water conveyed to the irrigation system.
- Installing storage reservoirs to keep water for irrigation.
- Managing the drainage water from the irrigation system to control deep percolation, to move tailwater to the reuse system, and to control erosion and adverse impacts on surface and groundwaters.
- Using filter strips to capture sediment and pollutants running off fields.
- Use grassed waterways to capture and trap sediment entering receiving waters.
- When irrigation water is conveyed down slopes that increase the velocity, causing erosion, install erosion controls, such as drops, chutes, buried pipelines, or erosion-resistant ditch linings.
-

c. Potential Compliance Measures for Groundwater Protection (Source Category: Irrigated Agriculture)[12]

The purpose of this management measure is reduce or eliminate leaching of irrigation water to the extent necessary to protect drinking water wells, and protect beneficial uses of both groundwaters and surface waters. Potential practices include the following:

- Manage irrigation water volume and timing to reduce or eliminate runoff and/or leaching to groundwater. Use crop and region specific evapotranspiration rates and/or soil moisture probes to determine when the best time and for how long to irrigate.
- The University of California- Davis Department of Land, Air and Water Resources (LAWR), drought tip 92-52, entitled *Irrigating Up Crops Efficiently with Sprinklers* provides guidance to help determine how long sprinklers should run and can be easily determined if the crop evapotranspiration rate and reference evapotranspiration rates are known.

[12] Nitrate polluted groundwater is identified as a substantial contributor locally to nitrate loads in TMDL project areas surface waters; further the designated groundwater recharge beneficial use of some project area stream reaches are not currently being supported. Consequently, it is important to consider mitigation of groundwater impacts by nitrate in this TMDL.

d. Potential Compliance Measures Involving Construction and Maintenance of Vegetated Treatment Systems (Source Category: Irrigated Agriculture, Urban-MS4)

The purpose of these management measures involves strategic use of engineered vegetated treatment systems, which include constructed wetlands, vegetated filter strips, buffers, and swales.

Constructed wetlands increase the residence time (duration that water "ponds" on the ground surface) of surface waters so that interactions between sediments and vegetation is increased. Increasing the soil-plant-water interaction time also increases the ability of pollutants (nutrients, some metals, and some organic molecules) to be attenuated, transformed, absorbed, and volatilized by various processes. A degraded wetland has less ability to remove NPS pollutants and to attenuate stormwater peak flows (Bedford and Preston, 1988; Richardson and Davis, 1987; Richardson, 1988). In addition, a degraded wetland can deliver increased amounts of sediment, nutrients, and other pollutants to the adjoining waterbody, thereby acting as a source of NPS pollution instead of a treatment (Brinson, 1988; Richardson, 1988). Additionally, constructed wetlands are not usually designated for wildlife and aquatic habitat beneficial uses and can cause harm to wildlife. Kesterson National Wildlife Refuge is a case and point. This managed and constructed wetland was designed to treat agricultural runoff and provide habitat for aquatic birds. In 1983 it was discovered that breeding populations of stilts, grebes, shufflers, coots, and other aquatic birds were experiencing reduced fertility and severe birth defects. The surface waters at Kesterson National Wildlife Refuge had accumulated lead, boron, chromium, molybdenum, and other pollutants, specifically selenium which exposure was linked to teratogenic effects in exposed aquatic birds. USEPA (2001) recommends deterring wildlife from using vegetated treatment systems.

The practices listed below should be used where engineered systems of wetlands or vegetated treatment systems can treat NPS pollution. Vegetated treatment systems can be placed in upland regions and protect wetlands and aquatic resources from NPS pollution. For the purposes of this management measure, vegetated treatment systems are vegetated filter strips and constructed wetlands.

- Install vegetated filter strips to remove sediment, nutrients, and other pollutants from runoff and wastewater.
- Construct vegetated filter strips in areas adjacent to waterbodies that may be subject to suspended solids and/or nutrient runoff. Key elements to be considered in the design of such areas include the type and quantity of pollutant, slope, native/non-native species, length, detention time, monitoring performance, and maintenance.
- Construct properly engineered systems of wetlands for NPS pollution control. Several factors to consider in the design and construction of an artificial wetland include hydrology, soils, vegetation, influent water quality, geometry, pretreatment, and maintenance.
- Manage constructed wetland systems to avoid negative impacts on surrounding ecosystems or groundwater.
- If measured concentrations of biological oxygen demand (BOD) or dissolved oxygen (DO) are low, use techniques to aerate the water column.

e. Potential Compliance Measures Involving Protection and Conservation of Wetlands and Riparian Areas (Source Category: Irrigated Agriculture, Urban-MS4)

The purpose of these management measures is to protect the water quality improvement and NPS pollution reduction benefits derived from wetlands and riparian areas.

Much of the planet's life depends on the existence of wetlands. They are vital to the survival of many fish and other aquatic life forms, birds, and plants. Wetlands that border first order streams were found by Whigham and others (1988) to be efficient at removing nitrate from groundwater and sediment from surface waters. When located downstream from first-order streams, wetlands and riparian areas were found to be less effective than those located upstream at removing sediment and nutrient from the stream itself because of a smaller percentage of stream water coming into contact with the wetlands (Whigham et al., 1988). It has also been estimated that the portion of a wetland or riparian area immediately below the source of NPS pollution might be the most efficient at removing pollutants (Cooper et al., 1987; Lowrance et al., 1983; Phillips, 1989).

Functional wetlands and riparian systems provide services such as enhanced water quality, surface and groundwater storage; flood control (adequate set-backs implied) and storm surge attenuation; contain valuable wildlife and aquatic habitats; and enable recreation and other cultural activities. These services are free of charge because they are self-sustaining. Highly modified wetlands and riparian systems are typically only managed for a few beneficial uses or services are very costly to maintain, and their long-term sustainability is uncertain.

Wetlands are characterized by a combination of standing water at the surface or root zone, unique soil conditions, and vegetation adapted to wet conditions (Mitsch and Gosselink, 1993). This management measure should combine structural and programmatic measures to protect wetland and riparian areas so that they maintain their existing functions. Potential measures and practices include the following:

- Consider wetlands and riparian areas and their pollutant attenuation potential on a watershed or landscape and maintain their function as part of a continuum of filters along rivers, streams, and coastal waters.
- Use historical ecology to help determine what type of wetland to conserve and where to focus those conservation efforts.
- Identify existing functions of those wetlands and riparian areas with significant NPS control potential when implementing NPS management practices. Do not alter wetlands or riparian areas to improve their water quality function at the expense of their other functions.
- Do not place surface water runoff ponds or sediment retention basins in healthy wetland systems.
- Conduct permitting, licensing, certification, and non-regulatory NPS pollution abatement activities in a manner that protects wetland functions.
- Obtain easements or full acquisition rights for wetlands and riparian areas along streams, bays, and estuaries.
- Use zoning and protective ordinances to control activities that have an adverse impact on these targeted areas through special area zoning and transferable development rights.
- Ensure that state water quality standards apply to wetlands.
- Establish, maintain, and strengthen regulatory and enforcement programs.
- Encourage the use of programs that restore wetlands and riparian areas.

- Educate landowners and agencies on the role of wetlands and riparian areas in protecting water quality and on management practices for restoring stream edges.
- Provide a mechanism for private landowners and agencies in mixed ownership watersheds to develop, by consensus, goals, management plans, and appropriate practices and to obtain assistance from federal and state agencies.
- Use appropriate pretreatment practices such as vegetated treatment systems or detention or retention basins to prevent adverse impacts on wetland functions that affect the abatement of NPS pollution from hydrologic changes, sedimentation, or contaminants.
- Reduce erosion and, to the extent practicable, retain sediment onsite during and after construction.

f. Potential Compliance Measures Involving Planning and Design for Watershed and Groundwater Protection (Source Category: Urban-MS4 Entities)

The intent of this management measure is to encourage land use and development planning on a watershed scale that takes into consideration sensitive areas that, by being protected, will maintain or improve water quality. Each element of the management measure addresses key issues that result in water quality degradation. The goals of these management measures are: 1) Avoid conversion, to the extent practicable, of areas that are particularly susceptible to erosion and sediment loss; 2) Preserve areas that provide important water quality benefits (e.g., wetlands) and/or are necessary to maintain riparian and aquatic biota; 3) Protect to the extent practicable the natural integrity of waterbodies and natural drainage systems (e.g., seeps and springs) associated with site development; and 4) Identify priority local and/or regional watershed pollutant reduction opportunities (e.g., improve existing urban runoff control structures).

Potential measures and practices include the following:

- Development sites should be evaluated to identify areas that are less suitable for development (i.e., steep slopes, erodible soils, wetlands, land within the 100-year floodplain, and historically or culturally significant areas). Building footprints and infrastructure should be located away from these areas where feasible. Local governments can enact ordinances to protect specific resources such as wetlands or riparian areas, and landowners can be encouraged to voluntarily practice conservation of ecologically significant areas.
- Areas particularly susceptible to erosion and sediment loss, specifically areas with highly erodible soils or steep slopes, should be avoided when locating new developments. Arendt (1996) developed a process by which a development envelope could be defined based on factors such as soil type, slope, ecological significance, floodplain delineations, existing vegetation, and cultural/historical significance. On a larger scale, undeveloped areas can be ranked by overlaying datasets in a geographic information system (GIS) that describes factors such as those listed above to guide decisions regarding zoning classification.
- Protect areas that provide water quality benefits, including wetlands, riparian vegetation and wildlife. Wetlands and riparian areas can be protected by local governments through the implementation of buffer ordinances. In addition, landowners can chose to implement buffers and setbacks on their property and to protect wetlands and other ecologically sensitive areas from development. To formalize this process of protecting water resources, a variety of conservation mechanisms can be used, such as easements,

deed restrictions, and covenants. Developers should be encouraged to protect water resources as a selling point (aesthetic and ecological amenity).

- Protect the integrity of water resources from the effects of site development and infrastructure. This can be accomplished by establishing setbacks from natural drainage areas; including seeps, springs, and groundwater recharge zones. Protect or promote vegetated buffers around natural drainage areas to provide additional protection. In addition, culverts and crossings can be designed to minimize impacts on riparian areas and to enhance natural drainage rather than impede or overwhelm it. Finally, grading plans can be designed to minimize the adverse hydrologic impacts of clearing and the creation of impervious areas by dispersing drainage to multiple outlets so as not to overwhelm a single drainage feature.
- Once applicable management practices are identified, areas within each watershed can be prioritized for implementation based on site characteristics such as location, ownership, drainage area, soils, and other conditions that may be applicable to specific management practices. These site assessments are conducted using existing data, such as aerial photographs, zoning maps and GIS data, and field surveys.

g. Potential Compliance Measures Involving Planning and Design for Impervious Surfaces (Source Category: Urban-MS4 Entities)

The intent of this management measure is to limit or reduce the amount of impervious areas. In most cases, when impervious cover is less than 10 percent of a watershed, streams remain healthy. Above 10 percent impervious cover, common signs of stream degradation are evident.

Developers can use innovative site and structure designs that reduce building footprints, decrease the amount of paved infrastructure, and provide for dispersed drainage and infiltration of runoff from impervious surfaces to reduce "effective impervious surface," which can be defined as impervious surface that is connected to the stormwater drainage system. The concept of effective impervious surface is important, because when runoff from these surfaces is directed to pervious areas rather to an impervious drainage system (i.e., curbs, gutters, street surfaces, and storm drain pipes), it can infiltrate, evaporate, or be taken up by vegetation, thereby reducing the total volume of runoff leaving a site.

The following techniques, among others, can be used as appropriate to reduce the impact of an individual development site to receiving waters. Municipalities can require that these types of practices be implemented through an ordinance that provides modified, environmentally friendly standards for infrastructure dimensions and layouts. In addition, these practices can be encouraged through stormwater credits or density credits provided as incentives to developers. Some of the management measures include:

- Designing streets to be narrower;
- Placing sidewalks on only one side of the street;
- Providing pervious areas (via porous pavement) for on-street parking, parking lots, alley-ways, and drive ways – avoid using near toxic hot spots or 100 feet from drinking water wells;
- Redesigning the layout of buildings to reduce street length and preserve open space;
- Increasing density for residential housing;
- Reducing parking lot sizes and parking space sizes;
- Promoting shared parking among nearby businesses with different peak demands for parking (e.g., churches and retail businesses); and

- Disconnecting impervious surfaces through creative grading plans and distributed infiltration areas.

h. Potential Compliance Measures Involving Construction Activities (Source Category: Urban-MS4 Entities)

The intent of this management measure is to incorporate pollution prevention procedures into the operation and maintenance of roads, highways, and bridges to reduce pollutant loadings to surface waters. Some the potential management measures include:

Detention Ponds and Large-Scale Structural Controls:

- Temporary detention ponds or vaults that hold runoff and release it slowly but completely after a 72-hour or shorter period.
- Retention pond or wetlands in which a permanent pool of water is maintained and runoff is slowly released over time. Retention practices, by allowing water to stand for a longer period of time, achieve greater pollutant removal through settling and allow for biological uptake using wetland vegetation.
- Open channel practices, such as grassed swales, are commonly and effectively used to collect, convey, and infiltrate runoff, but they are not intended to drain large areas of impervious surfaces and therefore are typically implemented in combination with other practices.

Devices that fit into the stormwater conveyance system:

- Infiltration practices, such as basins, trenches, and French drains that collect runoff and convey it through a porous matrix such as sand or organic filters and bioretention practices.
- Trash racks.
- Proprietary practices that are typically installed underground use mechanisms such as settling, absorption, and micro filtration as well as other mechanisms such as centrifugal force and gross filtration to remove solids and floatable debris.

Pollution prevention for the operation and maintenance of roads, highways, and bridges - Road Repairs:

- Potholes and cracks in road surfaces and retaining walls should be repaired promptly to prevent further degradation of the road surface. When these activities, (along with road expansion and repaving), disturb vegetated areas, the exposed soils should be protected from erosion using erosion and sediment controls and denuded areas should be renegotiated using seed, mulch, or sod immediately after road work has been completed.
- When performing bridge maintenance activities, use enclosures, and containment and collection systems to collect pollutants. Recommended enclosures include free hanging enclosures, total structure enclosures, and negative pressure systems. Recommended containment and collection systems include: cofferdams, barges, containment booms, and vacuum sanders. A runoff control plan should be in place for each large project, and smaller projects should be governed by standard operating procedures to prevent contamination of storm flows and to control spills.

i. Potential Compliance Measures Involving Landscaping Activities (Source Category: Urban-MS4 Entities)

The intent of this management measure is to increase pollutant attenuation through bioretention. Some potential management measures include:

- Increase groundwater infiltration and recharge by exposing native soils
  If possible, remove impervious surfaces and expose native soils. Planting vegetation and trees will provide shade and improve bioattenuation of polluted runoff, as well as increasing the aesthetics and provide a park-like setting for recreation.
- Increase pollutant attenuation through bioretention
  Polluted runoff is treated by natural soil process (or if natural soils are unavailable, then an engineered soil medium) and phytoremediation. The ideal application is for median strips, parking lot islands, and vegetated swales. Bioretention is not appropriate where soils are subject to freeze and thaw, where groundwater is less than 6 feet below ground surface or groundwater recharge zones, for slopes greater than 20 percent, or in sensitive habitats such as areas where mature trees are growing. Vegetated swales should be planted with grasses that require minimal maintenance and grow at least twice as tall as the maximum height of standing water or at least 4 inches, and side slopes should not exceed 3:1. Vegetated buffers should be planted with native grasses that require minimal maintenance. The width of the vegetated buffer should be at least an order of magnitude less than the width of the area draining into it, e.g., 150 feet wide area would need a vegetated buffer of at least 15 feet. Ensure that soils are permeable enough and the infiltration area is large enough so that water drains in three (3) or less days; this is necessary to ensure mosquito breeding is unsuccessful. Some areas may have mosquitos that take longer to complete their life cycle.
- Collect and store non-potable water on-site for use in landscaping
  Disconnect downspouts from roof or other impervious surface runoff collection systems and store water in a cistern, rain barrel, or other small scale water containment device. Make sure that water is stored in a closed container. Use this water on-site for landscaping irrigation, assuming the water is good quality. Always have water tested to be sure. Underground vaults can also be installed to capture and re-use irrigation water.
- Use landscaping to restore or maintain predevelopment hydrographs
  Install green roofs in highly urbanized areas. A green roof consists of vegetation and soil, or a growing medium, planted over a waterproofing membrane. Additional layers, such as a root barrier and drainage and irrigation systems may also be included. Green roofs can be used in many applications, including industrial facilities, residences, offices, and other commercial property. In Europe, they are widely used for their stormwater management and energy savings potential, as well as their aesthetic benefits (source: EPA Heat Island Effect). Green roofs can also provide habitat for birds and flying insects (e.g., honey bees).
- Replace Lawns with Rain gardens
  Rain gardens are small bioretention cells landscaped with plants, trees, and grasses. They are a particularly good way for individual homeowners to enhance their landscaping while protecting water quality. By planting easy-care native wildflowers, hardy perennials and grasses, attractive gardens can be constructed that have the added environmental benefits. Ensure that soils are permeable enough and the infiltration area is large enough so that water drains in three (3) or less days; this is necessary to ensure mosquito breeding is unsuccessful. Some areas may have

mosquitos that take longer to complete their life cycle.

Install planter boxes to use urban runoff from disconnected downspouts in landscaping. Pollutants can be attenuated by phytoremediation and soil microbial activity. To make sure that soils contain the correct amount and type of microorganisms use soil amendments such as microbial inoculations or good quality compost.

Curbs should be eliminated to allow highway and road runoff to be filtered through vegetated shoulders and medians. Eliminating curbs also increases infiltration to groundwater. If eliminating curbs is not possible, curbs can be designed with breaks and energy dissipaters to direct sheet flow to vegetated surfaces. These infiltration areas will require periodic inspection for damage, rilling, ponding, and trash accumulation, and will also require mowing or cropping of vegetation to prevent nuisance conditions.

- Plant and maintain urban forests
  Urban forests provide shade and reduce the urban heat island effect; improve soil and enhance bioretention; and improve air quality by absorbing nitrogen oxides, sulfur oxides, particulate matter, and carbon dioxide.

j. Potential Compliance Measures Involving Public Outreach and Education (Source Category: Urban-MS4 Entities)

The intent of this management measure is to implement educational programs to provide greater understanding of watersheds and to raise awareness and increase the use of applicable urban management measures and practices to control and prevent adverse impacts on surface and groundwaters. Public education, outreach, and training programs should involve targeted groups in the community. Implementation of urban pollution prevention and education programs can include the following subjects:

- Household
  Everyday household chemicals can be considered pollutants if they are improperly handled, stored, or disposed of. Automotive substances, household cleaners, fertilizers, pesticides, and home improvement materials must all be carefully managed to prevent contamination of runoff or groundwater. Car washing can flush nutrients, metals and hydrocarbons into storm drains. Watershed managers can address these problems through public outreach and education efforts such as pamphlet distribution, training on proper lawn care practices, and storm drain stenciling. Municipalities should also provide facilities for the disposal of household chemicals. In residential neighborhoods, pet waste can also be a major contributor to NPS pollution. Pet owners can be informed about proper disposal of waste, and municipalities can install "pet waste stations," pass and enforce “pooper scooper” ordinances, and post signs.
- Landscaping
  Outreach campaigns should also inform both commercial lawn care specialists and residents of the importance of proper application of fertilizers and pesticides. In particular, techniques such as Integrated Pest Management and timing of fertilizer application should be emphasized to provide citizens with the tools to use these substances efficiently and reduce overall pesticide and fertilizer use.
- Commercial
  One way commercial activities can generate NPS pollution is through the release of wastewater into a storm sewer system without a permit (this is known as an illicit

discharge). Municipalities must develop programs to help detect and eliminate these illicit discharges, as well as educate businesses and their employees. Commercial and industrial establishments should also implement good housekeeping practices, employee education and training programs and spill prevention plans. Measures should be taken to reduce the possibility of spills or leaks during general operation, maintenance, washing, construction, or repairs and to limit the exposure of pollutants to areas where they might come in contact with stormwater.

- Municipal
  Municipalities should implement good housekeeping practices, including programs to control trash, debris collected from street sweeping, stockpiled material, and corporation yard pollutant sources, and reduce pollutants from activities such as park and road maintenance. Programs that reduce the amount of trash on the streets include public education, increased waste disposal facilities and cleanup campaigns. Municipalities can also clean streets and prevent trash from entering stormwater with street sweeping and trash collection devices for storm drain inlets.

6. ENVIRONMENTAL CHECKLIST

Table 9 presents the 2014 CEQA Checklist, as published on the California Natural Resources Agency webpage (accessed January 2015).

Table 9. CEQA Checklist, as published in the 2014 CEQA Statues and Guidelines on the California Natural Resources Agency webpage.

	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?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area	☐	☐	☐	☒
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**				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	☐	☒	☐	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☒	☐	☐
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?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
pollutant concentrations?				
e) Create objectionable odors affecting a substantial number of people?	☐	☒	☐	☐
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 Wildlife or U.S. Fish and Wildlife Service?	☒	☐	☐	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation 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?	☐	☐	☐	☒
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
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?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
IX. HYDROLOGY AND WATER QUALITY -Would the project:				

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater 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)?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area 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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
X. LAND USE AND PLANNING Would the project:				
a) Physically divide an established	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
community?				
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?	☐	☒	☐	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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)?	☐	☐	☐	☒
b) 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards 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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Result in inadequate parking capacity?	☐	☐	☐	☒
g) Conflict 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e) Result in a determination by the wastewater treatment provider which	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
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?				
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
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?	☒	☐	☐	☐
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)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

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 Cal Code Regs., §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 non-structural (e.g., nutrient management, and other source controls) or structural methods (e.g., vegetated treatment systems) of compliance methods identified in Section 5 are expected to have an adverse impact on a scenic vista. Structural methods of compliance do not require the permanent construction of a sizable structure that would either block a scenic vista or substantially degrade the scenic vista. Further, the TMDL project area does not have designated vista sites located on the California State Highway System, according to GIS data available from the California Department of Transportation.

(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: Reasonably foreseeable methods of compliance identified in Section 5 do not require the building of structures that would damage natural or human made resources to the extent that it would impede the scenic quality of the area or scenic resources associated with state scenic highways. Some methods of compliance would increase riparian vegetation, and some types of vegetative treatment systems, would be aesthetic improvements to the TMDL project area. For example, efforts by municipalities and local citizens to improve urban watersheds and increase riparian habitat can increased the aesthetic value of urban creeks.

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

Answer: No impact.

Discussion: Reasonably foreseeable methods of compliance identified in Section 5 are of such a nature that they are not expected to degrade the visual character or quality within the TMDL project area. Indeed, some of the methods of compliance, for example increases in riparian vegetation, and some types of vegetative treatment systems, would be aesthetic improvements to the TMDL project 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 methods of compliance identified in Section 5 are of a nature such they would not expected to create new sources of substantial light or glare which adversely affect day or nighttime views in the TMDL project 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: Less than significant with mitigation incorporation.

Discussion: The proposed TMDL project does not propose or require any person to take agricultural lands out of production. Rather, the proposed TMDL project relies on implementation based on an existing regulatory program adopted by the Central Coast Water Board (the Agricultural Order). The Agricultural Order requires growers to comply with the Water Code and the Basin Plan by reducing or eliminating discharges of pollutants into surface and groundwater using management practices. None of the reasonably foreseeable non-structural (e.g., nutrient management, and other source controls) compliance methods identified in Section 5 would be expected to cause a substantial adverse change in Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, because non-structural methods of compliance do not reasonably include changes to land use patterns. Structural (e.g., vegetated treatment systems) compliance methods identified in Section 5 could result in a substantial adverse change pertaining to conversion to non-agricultural use of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance because some incidental amounts of these lands could be converted to non-agricultural uses (e.g., constructed wetlands) as described below. These actions can be expected to be less than significant with mitigation incorporation as described below.

Nutrient control strategies and measures in agricultural watersheds have been underway for many years in various agricultural watersheds in the state and throughout the nation. After reviewing the literature, research, and information staff has surveyed for this project, we are unaware of any cases where nutrient control strategies have directly been responsible for substantial or widespread adverse impacts resulting in the conversion of farmland to non-agricultural uses.

Dischargers may choose to install riparian buffer strips or vegetated treatment systems as identified in Section 5 to implement the proposed TMDLs and comply with the Agricultural Order. These actions could result in taking incidental amounts of land out of crop production. Where dischargers choose to install riparian habitat buffers to control discharges of waste, some farm land could be taken out of production.

Some structural treatment practices identified in Section 5 such as riparian buffers and vegetated treatment systems (e.g., wetlands) could result in conversion of farmland to non-agricultural uses. As discussed in the Agricultural Order's Final Subsequent Environmental Impact Report (March 17, 2011), if all growers in Tier 3 chose to install buffer strips to comply with the Agricultural Order, approximately 82 to 233 acres or 0.002 to 0.004% of the 540,000 acres of agricultural lands within the Region, would be taken out of production. This is because riparian buffers only affect a very narrow band of land on either side of a waterbody. Given the total number of acres farmed in the Central Coast Region, the impact on acres farmed does not constitute a substantial adverse conversion of farmland to non-agricultural uses even if all 233 acres in the Central Coast Region were converted to some other use. This estimate represents the acreage of land that would be taken out of production if all growers chose to install riparian habitat buffers and all of those buffers did not yield any agricultural products. The estimate may be less than this because of alternative means of compliance and/or mitigation. The TMDL project and the Agricultural Order which is proposed to implement the TMDLs do not require the use of buffers; other methods may be used or the discharges may not be significant due to existing practices.

Constructed wetlands or other types of vegetated treatment systems could potentially result in a substantial adverse conversion of farmland because these types of systems are anticipated to require more acreage than buffer strips. Mitigation strategies to reduce the adverse impacts of these systems to less than significant have previously been identified by reputable local resource professionals[13]; these include appropriate design and location strategies as outlined below:

1) Building vegetated treatments systems on small parcels that are already out of production and with minimal intrinsic habitat (e.g., woodchip reactors on the small vacant area that is often adjacent to existing tile-drain pumps);

2) Use larger-area cooperative systems – larger systems have a low circumference to area ratios, and thus result in less agricultural/habitat contact per unit of water quality improvement; and

3) Utilize other location strategies to mitigate impacts; e.g., using the lowest lying areas whose inundation is already increasingly problematic (for example, due to sea level rise, urban expansion, and higher impervious area), or identifying areas of currently non-productive agricultural land adjacent to waterbodies that could be used for treatment wetlands.

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

Answer: No impact.

Discussion: 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

[13] Dr. Fred Watson, Assistant Professor, California State University Monterey Bay and Mr. Ross Clark, Director of Central Coast Wetlands Group at Moss Landing Marine Laboratories.

uses or a Williamson Act contract. Agricultural management practices are consistent with agricultural zoning and would not change the land use designation.

(c) – Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Answer: No Impact.

Discussion: Implementation activities associated with the proposed TMDLs would not be expected to occur in forest or woodland areas of the Franklin Creek watershed. Available data indicate that stream reaches in the forested upland areas of the river basin are not adversely impacted by nutrient pollution.

(d) – Result in the loss of forest land or conversion of forest land to non-forest use?

Answer: No Impact.

Discussion: Implementation activities associated with the proposed TMDLs would not be expected to occur in forest or woodland areas of the Franklin Creek watershed. Although the Los Padres National Forest covers approximately one quarter of the Franklin Creek watershed area in the northern portion, the forest does not include sufficient tree stands to support logging.

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

Answer: Less than significant with mitigation incorporation.

Discussion: Refer back to previous responses under Heading II(a) and Heading II(d). Further, an additional potentially substantial adverse conversion of farmland to non-agricultural land could possibly indirectly result from food safety issues. Concerns have been raised about vegetated treatment systems attracting wildlife which might impact vegetable production and risk food safety, thereby indirectly taking viable farmland out of viable production due to issues arising from food safety risks. Possible mitigation strategies to reduce these adverse impacts to less than significant have been provided to Central Coast Water Board staff by a prominent local resource professional (Mr. Ross Clark, Director Central Coast Wetlands Group at Moss Landing Marine Laboratories, via personal communication May 2, 2012). There are several food safety task forces working to develop better guidelines describing what wetland, creek and treatment wetland related sources and vectors can potentially impact vegetable production and risk food safety. Resource professionals at the Central Coast Wetlands Group at Moss Landing Marine Laboratories could be working with these experts to design treatment wetlands that do not attract wildlife. It should be noted that many animals (birds, rodents, dear etc.) in fact presently use degraded drainages. Food safety risk can be mitigated through rodent fencing, raptor poles to reduce rodent populations, proper selection of plant species that deter pest species, and proper wetland feature design and planting to minimize open water habitat that attract geese and other waterfowl. Also, because these are isolated systems within the landscape they cannot be used as migration corridors by animals.

Finally, it should be noted that nutrient pollution control strategies have been underway for many years across the nation through state TMDL programs and across Europe through the

European Commission Nitrate Directive; staff is unaware of any reporting that implementation of these programs has been responsible for substantial and adverse losses or conversions of agricultural lands to non-agricultural uses.

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, the Congestion Management Plan and the Regional Transportation Plan (CSBPD, 2008).

(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: Santa Barbara County does not attain state clean air standards for ozone and fine particular matter (CSBPD, 2008). Some of the structural and the non-structural reasonably foreseeable compliance methods identified in Section 5 could potentially result in short-term net increase of these pollutants during construction.

Standard dust control construction management practices should mitigate fine particulate pollutions from soil disturbance activities such as grading and excavating basins or tilling for vegetation plantings. For most construction projects in Santa Barbara County, grading ordinances require dust control measures.

Implementation of these TMDLs should not result in long-term impacts to air quality since the TMDL implementation would be expected to increase vegetation locally on bare ground along farms and in drainage channels, or in riparian zones. Also there should not be any long-term increases in emissions because implementation project construction would occur over short periods of time. Lastly, implementation of TMDLs has been occurring across the nation for over two decades and staff is unaware of any reported examples of TMDL implementation having

significant adverse impacts on air quality by a cumulatively considerable net increase of air pollutants of concern.

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

Answer: Less than significant.

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 Franklin Creek 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 Santa Barbara County and within the City of Carpinteria, grading ordinances require standard dust control measures. However, as stated above, structural management practices could locally result in increased levels of particulate matter. Construction of the management practices would likely occur over a short periods of time; therefore, the impact would be temporary. Lastly, implementation of TMDLs has been occurring across the nation for over two decades and staff is unaware of any reported examples of TMDL implementation having significant adverse impacts on sensitive receptors above and beyond that normally associated with construction, tilling, and grading activities in an agricultural watershed.

(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. Whether the odor could affect a "substantial" number of people, per the Environmental Checklist significance threshold, would depend on the location of the bioreactor. Many bioreactors staff is aware of are located in in or adjacent to agricultural fields substantial distances from residential areas, schools, and housing. However, if objectionable odors would affect a substantial number of people, the impact could potentially be significant. The impact could be temporary because the woodchip bioreactor could be removed or rendered inoperable. This impact is also avoidable 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 Wildlife or U.S. Fish and Wildlife Service?**

Answer: Potentially significant impact.

Discussion: Reasonably foreseeable compliance measures identified in Section 5 could have potentially significant impacts on special status species. There are 14 rare, sensitive, threatened or endangered species in the vicinity of the TMDL project area according to digital map files available from the California Natural Diversity Database (CNDDB, data from March, 2017– see Table 4). The CNDDB is a program that inventories the status and location of rare plants, animals and insects in California. Some species may be present within project area lands classified as farmland or urban where TMDL implementation would most likely take place[14].

Reasonably foreseeable compliance measures identified in Section 5 may have a potentially adverse impact upon rare, sensitive, threatened or endangered species if they occur in an area where such species are located. Reduced flow may have the potential to significantly impact these species. Specific data to support this position were not found. However, both U.S. Fish and Wildlife Service and California State Parks have commented that there may be potentially adverse effects. U.S. Fish and Wildlife acknowledged that there are a range of possibilities. Reduced flow may benefit native species in the long run, making it harder for invasive species to survive. 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. In addition, alternatives to activities that involve land disturbance may be employed, such as use bioreactors (wood chips), irrigation and nutrient non-structural control measures, or moving crops rows in in a direction parallel to riparian zones to reduce runoff.

Structural or non-structural compliance methods identified in Section 5 may potentially result in reduced flows in waterbodies (e.g., reductions in tailwater discharge) may have the potential to have a substantial adverse impact on rare, sensitive, threatened or endangered species or their habitats. However, at this time, specific data and evidence to support this position were not found. Both U.S. Fish and Wildlife Service and the California Department of Parks have previously opined that there may be potentially significant adverse impacts related to reduction in flows[15], however U.S. Fish and Wildlife Service indicated that there are a range of possibilities. Reduced flow may benefit native species in the long run, making it harder for invasive species to survive. Reduced flows would likely allow the hydrology to go back to a more natural state; however, it could have negative effects by potentially reducing stream flows and associated freshwater aquatic habitat in areas inhabited by sensitive, rare, threatened or endangered species. The potential negative effects noted above are dependent on many variables including where the flow is reduced, by how much and at what times of the year. State Parks' position was similar. State Parks discussed that there would likely be an adjustment period. They suggested further hydrological analysis in these areas where there are special status species with certain water requirements. Additionally, State Parks suggested mitigation measures such as phasing in implementation of requirements in some areas and adjusting them on a watershed basis. In addition, note that reductions in surface runoff (tailwater discharge) may in fact result in increased percolation to groundwater resulting in an increased potential for shallow groundwater baseflow which could continue to support viable stream flows. Also worth noting is that if there is reduced flow from a point source, the State Water Resources Control

[14] Information 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 CNDDB shape files within the TMDL project area.

[15] See Final Subsequent Environmental Impact Report, Staff Recommendations for Agricultural Order, March 2011, Central Coast Regional Water Quality Control Board.

Board Division of Water Rights would have to execute a change petition, involving an evaluation of impacts created by the reduced flow/discharge.

Further, while rare, sensitive, threatened or endangered species are found on or adjacent to irrigated agricultural lands or census-designated urbanized areas in the project area, there are likely negative effects on these species because of current water quality degradation and excess nutrients associated with agricultural discharges. In other words, while rare, sensitive, threatened or endangered species may be present in areas with substantial amounts of regulated flows and agricultural return flows, excessive levels of nutrients, dissolved oxygen imbalances, and water quality degradation are not considered to be a desirable condition for the health and long-term sustainability of these species. While sensitive species may be present in some areas because of the discharged water, continuing to discharge water of low quality is not an environmentally desirable or sustainable practice with respect to the viability of sensitive species. Potential mitigation measures to prevent reduced flows or to reduce the impact of reduced flows include phasing in management practices that could result in reduced flows; and use of riparian buffers and other vegetated treatment systems that will effectively treat the water to remove pollutants, but not necessarily reduce flows.

Because of the mitigation strategies shown above, and because of the net corollary benefits to wildlife resulting from foreseeable compliance measures, potential substantial adverse effects are possible to a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, but are not anticipated to occur.

(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 U.S. 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: The available data suggest 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.

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 impact.

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.

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

Answer: Less than significant impact.

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.

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

Answer: Less than significant impact.

Discussion: Direct or indirect destruction of a unique paleontological resource or site or unique geologic feature is not expected to result from the TMDL project. The implementation of non-structural foreseeable compliance methods identified in Section 5 would not result in would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature because these compliance methods do not involve land-disturbance or physical effects. Similarly, it is unlikely that implementation of any structural BMP would result in the destruction of a unique paleontological resource or site or unique geologic feature. 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). However, in cases where the installation of structural BMPs may involve excavation activities, an investigation of paleontological resources may need to be conducted by a trained professional before any substantial disturbance of land that has not been disturbed previously.

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

Answer: Less than significant impact

Discussion: 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 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.

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

Answer: Less than significant.

Discussion: Reasonably foreseeable methods of compliance identified in Section 5 that could necessitate soil removal, for example construction of certain structural controls such as retention ponds, should not cause a substantial, or potentially substantial adverse change in soil erosion or the loss of topsoil. Staff expects topsoil to be replaced and/or erosion to be minimal. In fact, some of the methods of compliance, for example increases in riparian vegetation, vegetated treatment systems, impervious area management practices to reduce overland flow, and improved irrigation timing and efficiency would be net improvements to reduce soil loss and erosion in the TMDL project area.

(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.

(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 project will not 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.

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 TMDLs. The implementation of non-structural management practices identified in Section 5 (such as irrigation and nutrient management) 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 compliance methods, but these activities would be the same as typical construction and maintenance activities in urbanized or rural areas, such as ordinary road and infrastructure maintenance and building activities, or farm operations, and would not be anticipated to rise to the level of a substantial adverse change on the climate through greenhouse gas emissions.

(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 5. do not conflict with implementation of State's AB 32 Scoping Plan[16] to reduce the greenhouse gases that cause

[16] Calif. Air Resource Control Board, 2008. http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm

climate change. Moreover the Scoping Plan and the TMDLs both support efficient use of water, which results in reduced the consumption of energy and reductions in carbon emissions. The TMDLs contemplate more efficient use of synthetic fertilizers, which could be expected to have benefits on managing emissions nitrous oxide, a known greenhouse gas.

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?
(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: Less than significant impact.

Discussion: The purpose of the proposed TMDLs is to provide for attainment of water quality standards and restoration of beneficial uses – not to increase pollution, increase water quality degradation, or violate water quality standards. By requiring the implementation of structural and non-structural methods of compliance identified in Section 5 to reduce pollutants, it is expected that implementation of the proposed TMDLs will have an overall beneficial impact on water quality in the TMDL project area. Reasonably foreseeable structural compliance methods that

involve land disturbance could cause increases in turbidity and suspended sediment loads episodically and at local-scales, which may violate Basin Plan water quality standards for turbidity and suspended sediment. However, short-term, infrequent, localized water quality violations should be acceptable in cases where long-term benefits to the beneficial uses or surface waters outweigh episodic and ephemeral local impacts based on site-specific findings and information. Therefore, staff anticipates that there will be no substantial adverse impacts that result in violation of water quality standards or waste discharge requirements.

(b) – **Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater 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 TMDLs encourage irrigation efficiency management practices. Since irrigation efficiency typically reduces the use of irrigation water, which is groundwater, there will not be a negative impact. In fact, irrigation efficiency would be expected to have a net benefit on groundwater supplies.

(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 of 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 impact.

Discussion: Some of the reasonably foreseeable methods of compliance identified in Section 5, such as grassed waterways and channel vegetation, could potentially cause an alteration of the existing drainage pattern locally in such a manner that would result in flooding on or off-site. While vegetation prevents channel erosion and pollutant loading, vegetation can also slow down channel stream flows so channels must be larger to support greater capacity. When these

drainage systems are sized properly, they should not cause flooding. Also other on-farm conservation practices such as cover crops and sediment basins reduce the amount of flow into drain systems and would mitigate the flow reduction from channel vegetation.

(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: Less than significant impact.

Discussion: It is unlikely that the management practices identified in Section 5. 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: Less than significant impact.

Discussion: As the goal of this TMDL project is to provide for attainment of water quality standards and restoration of designated beneficial uses in streams within the Franklin Creek watershed, it is staff's judgment that it is extremely unlikely that thoughtfully selected, well-designed and implemented methods of compliance would result in the substantial adverse change and degradation of water quality. In fact, the reasonably foreseeable methods of compliance identified in Section 5 are expected to result in water quality improvements.

(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: No impact

Discussion: None of the reasonably foreseeable methods of compliance identified in Section 5 would be expected to place structures and have a substantial adverse impact within a 100-year flood hazard area 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?

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.

Discussion: The reasonable foreseeable methods of compliance identified in Section 5 which might have a significant impact include nutrient management, irrigation water management strategies, riparian buffers, retention ponds, and vegetated treatment systems. Staff determined that the reasonably foreseeable methods of compliance do not constitute the risk of a substantial, or potentially substantial, adverse change that would divide a community, because the methods of compliance are individual in nature and will 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: Less than significant with mitigation incorporation.

Discussion: The County of Santa Barbara Planning and Development Department has an Environmental Thresholds and Guidelines Manual for evaluating environmental impact thresholds for projects in the county (CSBPD, 2008). The thresholds are used for implementing CEQA on projects in the county and have specific guidelines for evaluating impacts to agriculture. To determine the suitability of the project, proposals are evaluated to determine “Will the proposal result in the conversion of prime agricultural land to non-agricultural use, impairment of agricultural land productivity (whether prime or non-prime), or conflict with agricultural preserve programs?” Additionally, mitigation measures to implement the TMDLs could conflict with the goals and policies of Agricultural Element of the Santa Barbara County Comprehensive Plan, which are to assure and enhance viable agricultural production.

As discussed previously in Heading II (a), reasonably foreseeable TMDL compliance measures could result in a potential substantial adverse change pertaining to conversion to non-agricultural use of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance because some incidental amounts of these lands could be converted to non-agricultural uses (such as constructed wetlands and other vegetated treatment systems, for example). These

compliance measures can be expected to be less than significant with mitigation incorporation, as described previously under Heading II (a).

Also worth noting, nutrient pollution control strategies have been underway for many years across the nation through state TMDL programs and across Europe through the European Commission Nitrate Directive; staff is unaware of any reporting that implementation of these water quality programs has been responsible for substantial and adverse losses or conversions of agricultural lands to non-agricultural uses. .

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

Answer: No impact.

Discussion: The available data suggest 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.

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.

Discussion: 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. The only mineral resource known in the Carpinteria area, and hence the Franklin Creek TMDL project area, is oil mining and extraction which is limited to offshore drilling and extraction platforms and onshore oil storage and processing facilities located near the coast (City of Carpinteria, 2003).

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 City of Carpinteria General Plan and Local Coastal 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 impact

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of structural BMPs that would result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. The implementation of some structural BMPs may result in localized increased groundborne vibration or groundborne noise levels. Such increased levels would likely be associated with heavy equipment operation associated with construction of structural BMPs. These impacts would, however, be temporary and associated directly with the use of heavy equipment. Therefore, staff concluded that the impact would 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: The City of Carpinteria General Plan and Local Coastal Plan specifies compliance with land use compatibility noise exposure standards to assure a compatible noise level for various land uses. 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 impact.

Discussion: The City of Carpinteria General Plan and Local Coastal 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.

(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: No impact.

Discussion: The project is located approximately 21 miles away from the nearest airport (Santa Barbara Airport). As such the project will not expose people residing or working in the project area to excessive noise levels.

(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: There are no private airstrips within the vicinity of the project area. As such the project will not expose people residing or working in the project area to excessive noise levels.

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 5. would have an effect upon, or result in a need for new or altered fire or police 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 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) – Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Answer: Less than significant impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 would be expected to cause a substantial, or potentially substantial, adverse conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system 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 BMPs could temporarily increase traffic in localized areas. However, due to the size and dispersal of such BMPs, the impact would not be significant.

(b) – Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards 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 would be expected to conflict with a congestion management plan or other standards established by the counties for designated roads or highways. Construction of structural BMPs could temporarily increase traffic in localized areas. However, due to the size and dispersal of such BMPs, the impact would not be significant..

(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 stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Answer: Less than significant impact

Discussion: Staff anticipates that MS4 entities will evaluate the need for structural improvements or changes to stormwater drainage systems areas in urban and residential areas. However, because stormwater infrastructure is already in place, staff does not anticipate that structural changes or large-scale construction, resulting in a substantial, or potentially substantial, adverse change in the environment, will occur. Also, stormwater discharges are typically already currently subject to Water Board permitting requirements which require protection of water quality and prevention of nuisance. Depending on the type of actions to modify or construct stormwater drainage systems, separate environmental review may be required.

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

Answer: Less than significant impact.

Discussion: None of the reasonably foreseeable compliance methods identified in Section 5 contemplate the use of structural BMPs that would require new or expanded entitlements for water supplies.

A number of compliance methods identified in Section 5 may include use of water supplies; for example irrigation for riparian restoration (tree-planting) and planting of vegetation for certain types of bioretention BMPs (e.g., vegetated swales). The selection of the appropriate compliance measures by responsible parties will need to take into consideration their existing water resources. Basing selection of compliance measures on existing water resources will prevent the need to seek new entitlements. Furthermore, compliance methods identified in the State Water Resources Control Board NPS Encyclopedia recommends that vegetated treatment options should incorporate native species to the extent feasible such that minimal maintenance is required.

(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: Less than significant impact.

Discussion: It is unlikely that implementation of the reasonably foreseeable compliance methods identified in Section 5 will result in the need for a treatment provider to make this determination. Should connection to an existing wastewater treatment plant be necessary, consultation with the treatment plant will determine if capacity is adequate. If capacity is not adequate, the parties needing wastewater treatment should develop an alternate plan for treatment of their wastewater.

(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: Potentially significant impact.

Discussion: The purpose of the TMDLs is to provide for attainment of water quality standards and restoration of beneficial uses. All of these compliance measures identified in this environmental analysis will likely improve water quality from the current baseline, where many discharges of pollutants are currently occurring in the watershed and will likely continue without the application of these additional protections. 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.

Reasonably foreseeable non-structural methods of compliance identified in Section 5 will not result in the substantial degradation of the environment for plant and animal species because

none of the non-structural BMPs would have any physical effects that could degrade the environment or impact plant or animal species.

However, as discussed previously, under Biological Resources- Category IV(a) wildlife plant and animal species could *potentially* be substantially adversely affected by the installation and operation of structural methods of compliance that involve substantial earth movement. If a responsible party proposed installation of a BMP that would require substantial earth movement, the discharger should consult with federal, state and local agencies, including but not limited to the county the project is located in, California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service, and implement mitigation identified by the agencies to avoid impacts to rare, threatened or endangered species. If no such mitigation is available, the use of that compliance measure in the specific area should not be implemented. In most cases, the installation of structural methods of compliance would be temporary, and any impacts could be avoided by adjusting the timing and/or location of the methods of compliance to take into account any candidate, sensitive, or special status species, or their habitats.

Structural or non-structural compliance methods identified in Section 5 that may potentially result in reduced flows in waterbodies (e.g., reductions in tailwater discharge) may have the potential to have a substantial adverse impact on rare, sensitive, threatened or endangered species, other wildlife, or their habitats. However, at this time, specific data and evidence to support this position were not found. Both U.S. Fish and Wildlife Service and the California Department of Parks have previously commented that there may be potentially significant adverse impacts related to reduction in flows[17], however U.S. Fish and Wildlife Service indicated that there are a range of possibilities. Reduced flow may benefit native species in the long run, making it harder for invasive species to survive. Reduced flows would likely allow the hydrology to go back to a more natural state; however, it could have negative effects by potentially reducing stream flows and associated freshwater aquatic habitat in areas inhabited by sensitive, rare, threatened, or endangered species. The potential negative effects noted above are dependent on many variables including where the flow is reduced, by how much and at what times of the year. State Parks' position was similar. State Parks discussed that there would likely be an adjustment period. They suggested further hydrological analysis in these areas where there are special status species with certain water requirements. Additionally, State Parks suggested mitigation measures such as phasing-in implementation of requirements in some areas and adjusting them on a watershed basis. In addition, note that reductions in surface runoff (tailwater discharge) may in fact result in increased percolation to groundwater resulting in an increased potential for shallow groundwater baseflow which could continue to support viable stream flows. As shown in the TMDL Project Report, available U.S. Geological Survey Stream gage flow data in the project area generally indicates that baseflow is an important hydrologic process in the project area.

While rare, sensitive, threatened, or endangered species are found on or adjacent to irrigated agricultural lands or census-designated urbanized areas in the project area, there are likely negative effects on these species because of current water quality degradation and excess nutrients associated with agricultural discharges. In other words, while rare, sensitive, threatened, or endangered species may be present in areas with substantial amounts of regulated flows and agricultural return flows, excessive levels of nutrients and water quality degradation are not considered to be a desirable condition for the health and long-term sustainability of these species. While sensitive species may be present in some areas because

[17] See Final Subsequent Environmental Impact Report, Staff Recommendations for Agricultural Order, March 2011, Central Coast Regional Water Quality Control Board.

of the discharged water, continuing to discharge water of low quality is not an environmentally desirable or sustainable practice with respect to the viability of sensitive species. Potential mitigation measures to prevent reduced flows or to reduce the impact of reduced flows include phasing in management practices that could result in reduced flows; and use of riparian buffers and other vegetated treatment systems that will effectively treat the water to remove pollutants, but not necessarily reduce flows.

Also noteworthy is the fact that nutrient control strategies and measures in agricultural watersheds have been underway for many years in various agricultural watersheds in the state and throughout the nation. After reviewing the literature, research, and information staff has surveyed for this project, Water Board staff is not aware of any cases where nutrient control strategies have directly been responsible for: substantial or widespread adverse impacts resulting in the degradation of the environment, substantial reductions in the habitat of fish and wildlife, caused a fish or wildlife population to drop below self-sustaining levels, threatens to eliminate a plant or animal community, reduces the number or restricts the range of a rare or endangered plant or animal, or eliminates important examples of the major periods of California history or prehistory.

Because of the mitigation strategies shown above, and because of the net corollary benefits to wildlife resulting from foreseeable compliance measures, potential substantial adverse effects are possible to a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, but are not anticipated to occur.

(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 TMDLs 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.

Future TMDLs may be developed for streams within the Franklin Creek watershed due to the following additional water quality impairments:

Potential TMDLs for Franklin Creek watershed include:

- Total Maximum Daily Loads for Fecal Indicator Bacteria (*E. Coli* and Fecal Coliform)
- Total Maximum Daily Loads for pH
- Total Maximum Daily Loads for Sodium

Implementation of the TMDLs in connection to the future TMDLs could have potentially significant impacts on the environment due to overlapping implementation schedules and milestones in the watershed. Multiple TMDL projects within the watershed could increase funding available for implementation and 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.

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

Utilities and Service Systems – Implementation of the TMDL project and future TMDLs could result in the construction of new stormwater drainage systems management practices such as regional woodchip bioreactors and wetland treatment systems that would treat 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 TMDLs 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. The net result of these actions is anticipated to be improvements to drinking water quality (MUN, GWR) and improvements to aquatic habitat beneficial uses. Therefore there should be no substantial adverse effects on human beings.

8. STATEMENT OF OVERRIDING CONSIDERATIONS AND DETERMINATION

Pursuant to CEQA Guidelines section 15093 (14 CCR, §15093) and in view of the entire record supporting the need for the TMDLs, the Central Coast Water Board hereby finds that the benefits of the *Total Maximum Daily Loads for Nitrogen and Phosphorus Compounds in Streams of the Franklin Creek Watershed* (Resolution No. R3-2018-0006) override and outweigh the potential significant adverse impacts of these TMDLs, for the reasons more fully set forth in the Staff Report and attachments thereto, including the CEQA Checklist and Analysis. Specific environmental benefits justify the adoption of these TMDLs 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 waters of the state as described in the *Total Maximum Daily Loads Report for Nitrogen and Phosphorus Compounds in Streams of the Franklin Creek Watershed* and associated reference materials.

The TMDLs for nitrogen and phosphorus compounds would result in actions to restore the quality of the waters of the state and protect and restore their beneficial uses. While some impacts could potentially occur due to reduced flows, earth-moving, or from implementing other actions to comply with the TMDLs for nitrogen and phosphorus compounds as described in the CEQA Checklist and Analysis, the benefits, which include contributing to the present and future restoration of beneficial water uses, and reducing or eliminating pollution and contamination, warrant approval of the proposed TMDLs, despite the potential for unavoidable adverse impacts.

9. REFERENCES

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