APPENDIX 3.8-C: BASIN PLAN WATER QUALITY IMPACT ASSESSMENT

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This Volume 2 technical appendix compiles information regarding the existing surface water quality conditions for waterbodies in the San Jose to Central Valley Wye Project Extent (project) footprint as documented in the San Francisco Bay, Central Coast, and Central Valley Regional Water Quality Control Boards' (RWQCB) Basin Plans. This appendix also summarizes potential impacts on each waterbody by alternative according to Section 3.8, Hydrology and Water Resources, of this Final environmental impact report (EIR)/environmental impact statement (EIS). The purpose of this appendix is to summarize impacts on waterbodies and Basin Plans to inform the Clean Water Act Section 401 Water Quality Certification.

Beneficial Uses in the RSA

Most of the waterbodies within the surface water resource study area (RSA) provide both economic and environmental beneficial uses. Economic beneficial uses include agricultural water supply (AGR), commercial and sport fishing (COMM), industrial service supply (IND), navigation (NAV), hydropower generation (POW), water recreation (contact [REC-1] and non-contact [REC-2]), and shellfish harvesting (SHELL). Environmental beneficial uses include preservation of biological habitats of special significance (BIOL), cold freshwater habitat (COLD), estuarine habitat (EST), freshwater replenishment (FRSH), groundwater recharge (GWR), fish migration (MIGR), preservation of rare and endangered species (RARE), fish spawning (SPWN), warm freshwater habitat (WARM), and wildlife habitat (WILD). Table 1 lists the waterbodies that have been identified within the RSA in alphabetical order and lists their beneficial uses. It also indicates whether the waterbody is within the project footprint.

Table 1 Beneficial Uses of Waterbodies in the RSA Identified by the San Francisco Bay, Central Coast, and Central Valley RWQCBs' Basin Plans

Waterbody	Subsection	Existing Beneficial Uses
San Francisco Bay RWQCB		
Alamitos (Los Alamitos) Creek	Not in project footprint	FRSH, GWR, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2
Anderson Reservoir	Not in project footprint	MUN, GWR, COMM, COLD, SPWN, WARM, WILD, REC-1, REC-2
Canoas Creek	Not in project footprint	WARM, WILD, REC-1, REC-2
Coyote Creek	San Jose Diridon Station Approach, Monterey Corridor, Morgan Hill and Gilroy	GWR, COMM, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2
Fisher Creek	Monterey Corridor, Morgan Hill and Gilroy	WARM, WILD, REC-1, REC-2
Guadalupe Creek	Not in project footprint	FRSH, GWR, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2
Guadalupe River	San Jose Diridon Station Approach, Monterey Corridor	GWR, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2
Lacustrine Wetlands[1]	Morgan Hill and Gilroy	AGR, COLD, FRESH, GWR, MIGR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE
Los Gatos Creek	San Jose Diridon Station Approach, Monterey Corridor	MUN, FRSH, AGR, GWR, COLD, RARE, WARM, WILD, REC-1
Palustrine Wetlands[2]	Morgan Hill and Gilroy	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE
Ross Creek	Not in project footprint	GWR, WARM, WILD, REC-1, REC-2

Waterbody	Subsection	Existing Beneficial Uses
Thompson Creek	Not in project footprint	WARM, WILD, REC-1, REC-2
Upper Penitencia Creek	Not in project footprint	FRSH, GWR, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2
Upper Silver Creek	Not in project footprint	RARE, WARM, WILD, REC-1, REC-2
Yerba Buena Creek	Not in project footprint	WARM, WILD, REC-1, REC-2
Central Coast RWQCB		
Alamias Creek	Not in project footprint	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, COMM
Carnadero Creek	Morgan Hill and Gilroy	MUN, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, RARE, COMM
Chesbro Reservoir	Not in project footprint	MUN, AGR, GWR, REC-1, REC-2, WILD, WARM, MIGR, SPWN, RARE, FRSH, NAV, COMM
Little Llagas Creek	Morgan Hill and Gilroy	MUN, AGR, GWR, REC-1, REC-2, WILD, WARM, COMM
Live Oak Creek	Not in project footprint	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, WARM, COMM
Llagas Creek (Below Chesbro Reservoir)	Morgan Hill and Gilroy	MUN, AGR, IND, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, RARE, COMM
Pacheco Creek	Morgan Hill and Gilroy, Pacheco Pass	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, MIGR, SPWN, BIOL, RARE, FRESH, COMM
Pajaro River	Morgan Hill and Gilroy	MUN, AGR, IND, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, FRESH, COMM
Pescadero Creek (tributary of San Benito River)	Not in project footprint	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, COMM
San Felipe Lake	Not in project footprint	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, FRSH, NAV, COMM
Tequisquita Slough	Morgan Hill and Gilroy	GWR, REC-1, REC-2, WILD, WARM, SPWN, COMM
Uvas Creek, downstream	Morgan Hill and Gilroy	MUN, AGR, IND, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, RARE, COMM
Central Valley RWQCB		
Agatha Canal (North)	Not in project footprint	AGR (L), WARM (L), WILD, BIOL
California Aqueduct	Pacheco Pass	MUN, AGR, PROC, IND, POW, REC-1, REC-2, WILD
Delta-Mendota Canal	Pacheco Pass	MUN, AGR, REC-1, REC-2, WARM, WILD
Los Banos Creek	San Joaquin Valley	AGR (L), WARM (L), WILD, BIOL
Mud Slough (North)[3]	San Joaquin Valley	AGR (L), REC-1, REC-2, WILD, WARM, SPWN, COMM, SHELL
O'Neill Reservoir	Not in project footprint	MUN, AGR, REC-1, REC-2, WARM

Waterbody	Subsection	Existing Beneficial Uses
Salt Slough	Not in project footprint	AGR, REC-1, REC-2, WARM, SPWN, WILD, COMM, BIOL, SHELL
San Joaquin River (Mendota Dam to Sack Dam)	Not in project footprint	AGR, PROC, REC-1, REC-2, WARM, MIGR, SPWN, WILD
San Luis Canal	San Joaquin Valley	AGR (L), WARM (L), WILD, BIOL
San Luis Reservoir	Not in project footprint	MUN, AGR, IND, POW, REC-1, REC-2, WARM, WILD
San Luis Wasteway	San Joaquin Valley	AGR (L), WARM (L), WILD, BIOL
San Pedro Canal	San Joaquin Valley	AGR (L), WARM (L), WILD, BIOL
Santa Fe Canal	San Joaquin Valley	AGR (L), WARM (L), WILD, BIOL

Source: SFBRWQCB 2017; Central Coast RWQCB 2019; Central Valley RWQCB 2018
AGR = agricultural supply; BIOL = preservation of biological habitats of special significance; COLD = cold freshwater habitat; COMM = commercial and sport fishing; FRSH = freshwater replenishment; GWR = groundwater recharge; IND = industrial service supply; (L) = limited beneficial use; MIGR = fish migration; MUN = municipal and domestic supply; POW = hydropower generation; PROC = industrial process supply; RARE = preservation of rare, threatened, or endangered species; REC-1 = water contact recreation; REC-2 = noncontact water recreation; SPWN = fish spawning, reproduction or early development; WARM = warm freshwater habitat; WILD = wildlife habitat
[1] Lacustrine wetlands include Coyote Creek Reservoir
[2] Palustrine wetlands include Constructed Basin 1, Coyote Creek Palustrine Forested Wetlands, Constructed Basin 2, Constructed Basin 3, Seasonal Wetland 1, Seasonal Wetland 2, Pond 1, and Constructed Basin 4
[3] Mud Slough (North) also includes the Mud Slough Alkali Marshes

Water Quality Objectives

Water quality objectives are the control and management criteria necessary to preserve the beneficial uses of a waterbody or groundwater aquifer. They are measured and analyzed through qualitative and quantitative factors. The tables in this section describe the surface water and groundwater quality objectives that were developed by the respective jurisdictional RWQCBs to protect the existing beneficial uses of surface water and groundwater within the RSA.

Table 2 Surface Water Quality Objectives

Parameter	Surface Water Quality Objective
San Francisco Bay RWQCB	
Bacteria	Water quality objectives for bacteria in Table 3-1 of the basin plan shall be strictly applied except when otherwise provided for in a TMDL.
Bioaccumulation	Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life.
Biostimulatory Substances	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.
Color	Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.
Dissolved Oxygen	In waters with the beneficial use of COLD, dissolved oxygen may not be depressed below 7.0 milligrams per liter. In waters with the beneficial use of warm, dissolved oxygen may not be depressed below 5.0 milligrams per liter. The basin plan also contains dissolved oxygen objectives for tidal waters.
Floating Materials	Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

Parameter	Surface Water Quality Objective
Oil and Grease	Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
Population and Community Ecology	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce significant alterations in population or community ecology or receiving water biota. In addition, the health and life history characteristics of aquatic organisms in waters affected by controllable water quality factors shall not differ significantly from those for the same waters in areas unaffected by controllable water quality factors.
pH	The pH shall not be depressed below 6.5 nor raised above 8.5. This encompasses the pH range usually found in waters within the basin. Controllable water quality factors shall not cause changes greater than 0.5 units in normal ambient pH levels.
Radioactivity	Radionuclides shall not be present in concentrations that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life. Waters designated with the beneficial use of MUN shall not contain concentrations of radionuclides in excess of the limits specified in table 4 of Section 64443 (Radioactivity) of Title 22 of the California Code of Regulations.
Salinity	Controllable water quality factors shall not increase the total dissolved solids or salinity of waters of the state so as to adversely affect beneficial uses, particularly fish migration and estuarine habitat.
Sediment	The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses. Controllable water quality factors shall not cause a detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life.
Settleable Material	Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses.
Suspended Material	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
Sulfide	All water shall be free from dissolved sulfide concentrations above natural background levels.
Tastes and Odors	Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
Temperature	The natural receiving water temperature of inland surface waters shall not be altered unless it can be demonstrated to the satisfaction of the regional board that such alteration in temperature does not adversely affect beneficial uses. In waters with the beneficial uses of warm or cold, the temperature shall not be increased by more than 5° Fahrenheit (2.8° Celsius) above natural receiving water temperature
Toxicity	All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms.
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10% in areas where natural turbidity is greater than 50 Nephelometric turbidity units (NTU).
Un-Ionized Ammonia	The discharge of wastes shall not cause receiving waters to contain concentrations of un-ionized ammonia in excess of the following limits (in milligrams per liter as Nitrogen): annual median: 0.025; maximum, central bay and upstream: 0.16; maximum, lower bay: 0.4.

Parameter	Surface Water Quality Objective
Chemical Constituents	Waters shall not contain chemical constituents in concentrations that negatively affect beneficial uses. The basin plan contains numerical water quality objectives for specific chemical constituents for specific stream types, waterbodies, watersheds, tidal areas, and beneficial uses. See the tables in chapter 3 of the basin plan for more information.
Central Coast RWQCB	
Color	Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. Coloration attributable to materials of waste origin shall not be greater than 15 units or 10% above natural background color, whichever is greater.
Tastes and Odors	Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
Floating Material	Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
Suspended Material	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
Settleable Material	Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses
Oil and Grease	Waters shall not contain oils, greases, waxes, or other similar materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
Biostimulatory Substances	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.
Sediment	The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increase in turbidity attributable to controllable water quality factors shall not exceed the following limits: 1. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. 2. Where natural turbidity is between 50 and 100 NTU, increases shall not exceed 10 NTU. 3. Where natural turbidity is greater than 100 NTU, increases shall not exceed 10%. Allowable zones of dilution within which higher concentrations would be tolerated would be defined for each discharge in discharge permits.
pH	In waters with the beneficial uses of MUN, AGR, REC-1, or REC-2, the pH value shall neither be depressed below 6.5 nor raised above 8.3. In waters with the beneficial uses of COLD or WARM, the pH value shall not be depressed below 7.0 or raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters. For waters not mentioned by a specific beneficial use, the pH value shall not be depressed below 7.0 or raised above 8.5.

Parameter	Surface Water Quality Objective
Dissolved Oxygen	For waters not mentioned by a specific beneficial use, dissolved oxygen concentration shall not be reduced below 5.0 milligrams per liter at any time. Median values should not fall below 85% saturation as a result of controllable water quality conditions. In waters with the beneficial uses of COLD, the dissolved oxygen concentration shall not be reduced below 7.0 milligrams per liter at any time. In waters with the beneficial uses of WARM, the dissolved oxygen concentration shall not be reduced below 5.0 milligrams per liter at any time. In waters with the beneficial use of AGR, dissolved oxygen concentration shall not be reduced below 2.0 milligrams per liter at any time.
Temperature	Natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the regional board that such alteration in temperature does not adversely affect beneficial uses. In waters with the beneficial uses of COLD or WARM, at no time or place shall the temperature be increased by more than 5º Fahrenheit above natural receiving water temperature.
Toxicity	All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life.
Pesticides	No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life. For waters where existing concentrations are presently nondetectable or where beneficial uses would be impaired by concentrations in excess of nondetectable levels, total identifiable chlorinated hydrocarbon pesticides shall not be present at detectable concentrations.
Organic Chemicals	Where wastewater effluents are returned to land for irrigation uses, regulatory controls shall be consistent with Title 22 of the California Code of Regulations and other relevant local controls. In waters with the beneficial use of MUN, water shall not contain concentrations of organic chemicals in excess of the limiting concentrations set forth in California Code of Regulations, title 22, chapter 15, article 5.5, section 64444.5, Table 5 and listed in Table 3-1.
Other Organics	Methylene Blue Activated Substances: 0.2 Milligrams per liter; Phenols: 0.1 Milligrams per liter; Polychlorinated Biphenyls (PCBs): 0.3 µg/L; Phthalate Esters: 0.002 µg/L
Phenol	In waters with the beneficial use of MUN, waters shall not contain phenol concentrations in excess of 1.0 micrograms per liter.
Radioactivity	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. In waters with the beneficial use of MUN, waters shall not contain concentrations of radionuclides in excess of the limits specified in California Code of Regulations, title 22, chapter 15, article 5, sections 64441 and 64443, table 4.
Bacteria	In waters with the beneficial uses of REC-1 or REC-2, fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 milliliters, nor shall more than 10% of total samples during any 30-day period exceed 400/100 milliliters.

Parameter	Surface Water Quality Objective
Chemical Constituents	In waters with the beneficial use of MUN, water shall not contain concentrations of organic chemicals in excess of the limiting concentrations set forth in California code of regulations, title 22, article 4, chapter 15, section 64435, tables 2 and 3 as listed in table 3-2. In waters with the beneficial use of AGR, waters shall not contain concentrations of chemical constituents in amounts which adversely affect the beneficial use. Waters used for irrigation and livestock watering shall not exceed concentrations for those chemicals listed in table 3-4 of the basin plan. In waters with the beneficial uses of WARM or COLD, waters shall not contain concentrations of chemical constituents known to be deleterious to fish or wildlife in excess of the limits listed in table 3-5.
Cadmium	In waters with the beneficial use of SPWN, cadmium shall not exceed 0.003 milligrams per liter in hard water or 0.0004 milligrams per liter in soft water at any time. Hard water is defined as water exceeding 100 milligrams per liter as calcium carbonate.
Central Valley RWQCB	
Bacteria	In waters designated REC-1 the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 milliliters, nor shall more than 10% of the total number of samples taken during any 30-day period exceed 400/100 milliliters.
Biostimulatory Substances	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths in concentrations that cause nuisance or negatively affect beneficial uses.
Chemical Constituents	Waters shall not contain chemical constituents in concentrations that negatively affect beneficial uses. At a minimum, water designated MUN shall not contain concentrations of chemical constituents in excess of the Maximum Contaminant Levels specified in title 22 of the California code of regulations.
Color	Waters shall be free of discoloration that causes nuisance or negatively affects beneficial uses.
Dissolved Oxygen	Within the legal boundaries of the delta, the do concentration shall not be reduced by the amounts specified in the basin plan. For surface waterbodies outside the legal boundaries of the delta, the monthly median dissolved oxygen concentrations shall not fall below 85% of saturation in the main water mass, and the 95-percentile concentration shall not fall below 75% of saturation. The dissolved oxygen concentrations shall not be reduced below the minimum levels specified in the basin plan.
Floating Material	Waters shall not contain floating material in amounts that cause nuisance or negatively affect beneficial uses.
Methylmercury	For the delta and yolo bypass waterways listed in appendix 43 of the basin plan, the average methylmercury concentrations shall not exceed 0.08 and 0.24 milligrams of methylmercury per kilogram, wet weight, in muscle tissue of trophic level 3 and 4 fish, respectively (150–500 millimeters total length). The average methylmercury concentrations shall not exceed 0.03 milligrams of methylmercury per kilogram, wet weight, in whole fish less than 50 millimeters in length.
Oil and Grease	Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise negatively affect beneficial uses.
pH	The pH of water shall not be depressed below 6.5, raised above 8.5, or changed at any time more than 0.3 unit from normal ambient pH.

Parameter	Surface Water Quality Objective
Pesticides	Pesticide concentrations shall not exceed the levels shown in Table Iii-2a of the Basin Plan and shall meet all other objectives listed in the Basin Plan pertaining to concentrations, discharges, total identifiable persistent chlorinated hydrocarbon pesticides, antidegradation policies, municipal supply, and thiobencarb.
Radioactivity	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
Salinity	The objectives in table iii-3 of the basin plan shall be met for the specified waterbodies. Salinity objectives applicable in the delta can be found in the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.
Sediment	The suspended sediment load and suspended sediment discharge rate of waters shall not be altered in such a manner as to cause nuisance or negatively affect beneficial uses.
Settable Material	Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or negatively affects beneficial uses.
Suspended Material	Waters shall not contain suspended material in concentrations that cause nuisance or negatively affect beneficial uses.
Taste and Odors	Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise negatively affect beneficial uses.
Temperature	Natural receiving water temperatures of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the RWQCB that such alteration in temperature does not negatively affect beneficial uses.
Toxicity	All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or negatively affect beneficial uses. Increases in turbidity attributable to controllable water quality factors shall not exceed limits provided in the basin plan.
Bacteria	In waters designated REC-1 the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 milliliters, nor shall more than 10% of the total number of samples taken during any 30-day period exceed 400/100 milliliters.

Source: San Francisco Bay RWQCB 2017; Central Coast RWQCB 2019; Central Valley RWQCB 2018
RWQCB = Regional Water Quality Control Board
TMDL = total maximum daily load
AGR = agricultural supply
COLD = cold freshwater habitat
MUN = municipal and domestic supply
REC-1 = water contact recreation
REC-2 = noncontact water recreation
SPWN = fish spawning, reproduction or early development
WARM = warm freshwater habitat

Table 3 Groundwater Quality Objectives

Parameter	Groundwater Quality Objective
San Francisco Bay RWQCB	
Bacteria	For groundwater basins and/or subbasins with the beneficial use of MUN, the median of the most probable number of coliform organisms over any seven-day period shall be less than 1.1 most probable number per 100 milliliters (MPN/100 mL).
Organic and Inorganic Chemical Constituents	All groundwater shall be maintained free of organic and inorganic chemical constituents in concentrations that adversely affect beneficial uses. For groundwater basins and/or subbasins with the beneficial use of MUN, shall not contain concentrations of constituents in excess of the maximum (MCLs) or secondary maximum contaminant levels (SMCLs) specified in Table 3-5 of the basin plan. For groundwater basins and/or subbasins with the beneficial use of AGR, groundwater shall not contain concentrations of chemical constituents in excess of levels specified in Table 3-6 of the basin plan. For groundwater basins and/or subbasins with the beneficial use of IND, groundwater shall not contain pollutant levels that impair current/potential industrial uses.
Radioactivity	For groundwater basins and/or subbasins with the beneficial use of MUN, groundwater shall not contain concentrations of radionuclides in excess of the MCLs specified in Table 3-5 of the basin plan and Table 4 (Radioactivity) of Section 64443 of Title 22.
Taste and Odor	For groundwater basins and/or subbasins with the beneficial use of MUN, groundwater shall not contain taste- or odor-producing substances in concentrations that cause a nuisance or adversely affect beneficial uses. At a minimum, groundwater shall not contain concentrations in excess of SMCLs in Table 3-5 of the basin plan.
Central Coast RWQCB	
Tastes and Odors	Groundwaters shall not contain taste or odor producing substances in concentrations that adversely affect beneficial uses.
Radioactivity	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. For groundwater basins and/or subbasins with the beneficial use of MUN, ground waters shall not contain concentrations of radionuclides in excess of the limits specified in the California Code of Regulations.
Bacteria	For groundwater basins and/or subbasins with the beneficial use of municipal and domestic supply, the median concentration of coliform organisms over any seven-day period shall be less than 2.2/100 milliliters.
Organic Chemicals	For groundwater basins and/or subbasins with the beneficial use of MUN, ground waters shall not contain concentrations of organic chemicals in excess of the maximum contaminant levels for primary drinking water standards specified in the California Code of Regulations
Inorganic Chemicals	For groundwater basins and/or subbasins with the beneficial use of MUN, groundwaters shall not contain concentrations of inorganic chemicals in excess of the maximum contaminant levels for primary drinking water standards specified in the California Code of Regulations. For groundwater basins and/or subbasins with the beneficial use of AGR, water used for irrigation and livestock watering shall not exceed the concentrations for those chemicals listed in Tables and 3-1 and 3-2 of the basin plan.

Parameter	Groundwater Quality Objective
Central Valley RWQCB	
Bacteria	For groundwater basins and/or subbasins with the beneficial use of MUN, the most probable number of coliform organisms over any seven-day period shall be less than 2.2/100 ml.
Chemical Constituents	Waters shall not contain chemical constituents in concentrations that negatively affect beneficial uses. At a minimum, water designated MUN shall not contain concentrations of chemical constituents in excess of the Maximum Contaminant Levels specified in title 22 of the California code of regulations. At a minimum, water designated MUN shall not contain lead in excess of 0.015 mg/l.
Radioactivity	At a minimum, ground waters designated for MUN shall not contain concentrations of radionuclides in excess of the MCLs specified in Section 64443 of Title 22 of the California Code of Regulations
Taste and Odors	Ground waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
Toxicity	Ground waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s).

Source: San Francisco Bay RWQCB 2017; Central Coast RWQCB 2019; Central Valley RWQCB 2018
RWQCB = Regional Water Quality Control Board

Clean Water Act Section 303(d) List and Total Maximum Daily Loads

Section 303(d) of the Clean Water Act requires states to develop a list of waterbodies that do not meet water quality objectives. A Total Maximum Daily Load (TMDL) is a regulatory response initiated by a state to determine the loading capacity of the waterbody and to allocate that load among different pollutant sources so that the appropriate control actions can be taken and water quality standards achieved. Wasteload allocations established by TMDLs are generally implemented through requirements in National Pollutant Discharge Elimination System (NPDES) permits under Section 402 of the Clean Water Act. The TMDL process links the attainment of water quality standards in the Basin Plan with the implementation of actions required by NPDES permits that are designed to attain those standards. The table below summarizes the waterbodies in the RSA with pollution levels that consistently exceed one or more water quality objectives that cause impairments, as described on the 2014-2016 303(d) List.

Table 4 Impaired Waterbodies in the RSA

Waterbody	Impairment	Status of TMDL	Notes on TMDL
San Francisco Bay RWQCB			
Anderson Reservoir (Lake)	Mercury	TMDL required	Estimated to be complete by 2013, on Statewide Mercury Control Program for Reservoirs list
	PCBs	TMDL required	Estimated to be complete by 2019
Calabazas Creek	Diazinon	Addressed with approved TMDL	Approved in 2007; applies to all creeks and pesticides

Waterbody	Impairment	Status of TMDL	Notes on TMDL
Coyote Creek (Santa Clara County)[1]	Trash	TMDL required	Estimated attainment: 2029
	Diazinon	Addressed with approved TMDL	Approved in 2007; applies to all creeks and pesticides
	Toxicity	TMDL required	Estimated completion: 2029
Alamitos Creek	Mercury	Addressed with approved TMDL	Approved in 2010
Guadalupe Creek	Mercury	Addressed with approved TMDL	Approved in 2010
Guadalupe River[1]	Mercury	Addressed with approved TMDL	Approved in 2010
	Trash	TMDL required	Estimated attainment: 2029
	Diazinon	Addressed with approved TMDL	Approved in 2007; applies to all creeks and pesticides
Guadalupe Slough	Toxicity	TMDL required	Estimated to be complete by 2029
Los Gatos Creek (R2)[1]	Diazinon	Addressed with approved TMDL	Approved in 2007; applies to all creeks and pesticides
Oiger Quarry Ponds	Mercury	TMDL required	Estimated to be complete by 2029, on Statewide Mercury Control Program for Reservoirs list
Saratoga Creek	Trash	TMDL required	Estimated attainment: 2029
	Diazinon	Addressed with approved TMDL	Approved in 2007; applies to all creeks and pesticides
Silver Creek (Santa Clara County)	Trash	TMDL required	Estimated attainment: 2029
Central Coast RWQCB			
Carnadero Creek (Uvas Creek below Bloomfield Road) [1]	E. coli	Addressed with approved TMDL	Approved in 2010; see fecal coliform impairment
	Fecal coliform	Addressed with approved TMDL	Approved in 2010
	Low dissolved oxygen	TMDL required	Estimated to be complete by 2018
	Nitrate	TMDL required	Estimated to be complete by 2018
	Turbidity	TMDL required	Estimated to be complete by 2023
Chesbro Reservoir	Mercury	TMDL required	Estimated to be complete by 2018, on Statewide Mercury Control Program for Reservoirs list

Waterbody	Impairment	Status of TMDL	Notes on TMDL
Jones (Furlong) Creek[1]	Chlorpyrifos	Addressed with approved TMDL	Includes diazinon
	E. coli	TMDL required	Estimated to be complete by 2027
	Fecal coliform	Addressed with approved TMDL	Approved in 2010
	Nitrate	TMDL required	Estimated to be complete by 2018
	Turbidity	TMDL required	Estimated to be complete by 2023
Llagas Creek (below Chesbro Reservoir)[1]	Chloride	TMDL required	Estimated to be complete by 2027
	Chlorpyrifos	Addressed with approved TMDL	Approved in 2013
	Electrical conductivity	TMDL required	Estimated to be complete by 2027
	E. coli	TMDL required	Estimated to be complete by 2027; see fecal coliform impairment
	Fecal coliform	Addressed with approved TMDL	Approved in 2010
	Low dissolved oxygen	TMDL required	Estimated to be complete by 2018
	Sodium	TMDL required	Estimated to be complete by 2027
	Nitrate	Addressed with approved TMDL	Approved in 2006, replaces nutrients TMDL
	Total dissolved solids	TMDL required	Estimated to be complete by 2027
	Turbidity	TMDL required	Estimated to be complete by 2023
	Sedimentation/ Siltation	Addressed with approved TMDL	Approved in 2007
Millers Canal[1]	Chlorophyll-a	TMDL required	Estimated to be complete by 2018
	E. coli	TMDL required	Estimated to be complete by 2027
	Fecal coliform	Addressed with approved TMDL	Approved in 2010
	Low dissolved oxygen	TMDL required	Estimated to be complete by 2018
	Nitrate	Addressed with approved TMDL	Approved in 2006
	pH	TMDL required	Estimated to be complete by 2027
	Temperature, water	TMDL required	Estimated to be complete by 2023
	Toxicity	TMDL required	Estimated to be complete by 2023
	Turbidity	TMDL required	Estimated to be complete by 2023

Waterbody	Impairment	Status of TMDL	Notes on TMDL
Pacheco Creek[1]	Fecal coliform	Addressed with approved TMDL	Approved in 2010
	Low dissolved oxygen	TMDL required	Estimated to be complete by 2027
	Turbidity	TMDL required	Estimated to be complete by 2023
Pajaro River[1]	Boron	TMDL required	Estimated to be complete by 2027
	Chlordane	TMDL required	Estimated to be complete by 2027
	Chloride	TMDL required	Estimated to be complete by 2027
	Chlorpyrifos	Addressed with approved TMDL	Approved in 2013; includes diazinon; applies to entire watershed
	Chromium	TMDL required	Estimated to be complete by 2027
	DDD	TMDL required	Estimated to be complete by 2027
	DDE	TMDL required	Estimated to be complete by 2027
	DDT	TMDL required	Estimated to be complete by 2027
	Diazinon	Addressed with approved TMDL	Approved in 2013
	Dieldrin	TMDL required	Estimated to be complete by 2027
	E. coli	TMDL required	Estimated to be complete by 2027; see fecal coliform impairment
	Fecal coliform	Addressed with approved TMDL	Approved in 2010
	Low dissolved oxygen	TMDL required	Estimated to be complete by 2027
	PCBs	TMDL required	Estimated to be complete by 2027
	pH	TMDL required	Estimated to be complete by 2027
	Sodium	TMDL required	Estimated to be complete by 2027
	Toxicity	TMDL required	Estimated to be complete by 2023
	Turbidity	TMDL required	Estimated to be complete by 2023
	Nitrate	Addressed with approved TMDL	Approved in 2006, replaces nutrients TMDL
	Sedimentation/ Siltation	Addressed with approved TMDL	Approved in 2007

Waterbody	Impairment	Status of TMDL	Notes on TMDL
Tequisquita Slough[1]	Ammonia	TMDL required	Estimated to be complete by 2018
	Chlorophyll-a	TMDL required	Estimated to be complete by 2018
	Fecal coliform	Addressed with approved TMDL	Approved in 2010
	Low dissolved oxygen	TMDL required	Estimated to be complete by 2018
	pH	TMDL required	Estimated to be complete by 2027
	Toxicity	TMDL required	Estimated to be complete by 2023
	Turbidity	TMDL required	Estimated to be complete by 2023
Uvas Creek (below Uvas Reservoir) [1]	Low dissolved oxygen	TMDL required	Estimated to be complete by 2018
	Turbidity	TMDL required	Estimated to be complete by 2023
Central Valley RWQCB			
Agatha Canal (Merced County)	pH	TMDL required	Estimated to be complete by 2021
	Selenium	Addressed with approved TMDL	Approved in 2010
Grassland Marshes	Electrical conductivity	TMDL required	Estimated to be complete by 2027
	Selenium	Addressed with approved TMDL	Approved in 2000
Los Banos Creek (below Los Banos Reservoir, Merced County)[1]	Indicator bacteria	TMDL required	Estimated to be complete by 2021
	Total dissolved solids	TMDL required	Estimated to be complete by 2027
	Low dissolved oxygen	TMDL required	Estimated to be complete by 2023
	Toxicity	TMDL required	Estimated to be complete by 2027
Mud Slough, North (upstream of San Luis Dam)	Boron	TMDL required	Estimated to be complete by 2019
	Electrical conductivity	TMDL required	Estimated to be complete by 2019
	Indicator bacteria	TMDL required	Estimated to be complete by 2021
	Selenium	Addressed with approved TMDL	Approved 2002
	Pesticides	TMDL required	Estimated to be complete by 2019
	Toxicity	TMDL required	Estimated to be complete by 2021
O'Neill Forebay	Mercury	TMDL required	Estimated to be complete by 2012, on Statewide Mercury Control Program for Reservoirs list
	PCBs	TMDL required	Estimated to be complete by 2027
Poso Slough	Sediment toxicity	TMDL required	Estimated to be complete by 2021

Waterbody	Impairment	Status of TMDL	Notes on TMDL
San Luis Reservoir	Chlordane	TMDL required	Estimated to be complete by 2027
	Mercury	TMDL required	Estimated to be complete by 2027, on Statewide Mercury Control Program for Reservoirs list
	PCBs	TMDL required	Estimated to be complete by 2027
	Total DDT (sum of 4,4'- and 2,4'- isomers of DDT, DDE, and DDD)	TMDL required	Estimated to be complete by 2027
Salt Slough (Mud Slough to San Dam, Merced County)	Chlorpyrifos	Addressed by action other than TMDL	Expected attainment: 2026
	Toxicity	TMDL required	Estimated to be complete by 2027

Source: SWRCB 2016
E. coli = Escherichia coli
DDT = dichlorodiphenyltrichloroethane
DDD = dichlorodiphenyldichloroethane
PCB = polychlorinated biphenyl
SWRCB = State Water Resources Control Board
[1] These waterbodies intersect the project footprint.

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Summary of Impacts on Beneficial Uses, Water Quality Objectives, and Clean Water Act Section 303(d) List impairments

The following table lists the waterbodies within the project footprint with beneficial uses designated in the respective Basin Plan. The beneficial uses of each waterbody, as listed in the respective Basin Plan, is provided, as well as the applicable Water Quality Objectives and Section 303(D) impairments, if any. Because of the vast number of waterbodies within the jurisdiction of the San Francisco Bay, Central Coast, and Central Valley RWQCBs' jurisdictions, the RWQCBs do not identify beneficial uses for each individual waterbody in their respective Basin Plans. Waterbodies that do not have individual beneficial use designations in a Basin Plan do not have any beneficial uses listed in the following table. However, the RWQCBs protect beneficial uses of waters of the state whether or not they are identified in a Basin Plan. Generally, the RWQCBs designate beneficial uses for unlisted waterbodies on a case-by-case basis. In addition, the following table identifies whether temporary, permanent, and operations impacts would occur in each waterbody. Refer to Appendix 2-E of this EIR/EIS for a description of the IAMFs that have been incorporated into the design of each of the project alternatives. Refer to Section 3.7, Biological and Aquatic Resources, for the impacts on aquatic resources and the mitigation measures due to the removal/disturbance of waterbodies and wetlands as well as tunneling below waterbodies.

Table 5 Summary of Impacts on Beneficial Uses, Water Quality Objectives, and Clean Water Act Section 303(d) List Impairments by Alternative

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
San Jose Diridon Station Approach Subsection					**Viaduct to I-880**	**Viaduct to Scott**		**Blended, At-grade**
Los Gatos Creek	San Francisco Bay	MUN, FRSH, AGR, GWR, COLD, RARE, WARM, WILD, REC-1	Diazinon	Table 3-1, Table 3-2, Table 3-4, Table 3-5, and Table 3-6. Dissolved oxygen: 7.0 milligrams per liter minimum	The project would result in minor disturbances to Los Gatos Creek during construction of a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the channel of Los Gatos Creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Vegetation management may result in leaks, spills, or other discharges of pesticides to Los Gatos Creek. However, the Authority would not use diazinon for vegetation management.	Same as Alternative 1.		The project would use the existing Los Gatos Creek bridge. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the channel of Los Gatos Creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Vegetation management may result in leaks, spills, or other discharges of pesticides to Los Gatos Creek. However, the Authority would not use diazinon for vegetation management.
Guadalupe River	San Francisco Bay	GWR, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2	Mercury, trash, diazinon	Table 3-2, Table 3-4, and Table 3-4A. Dissolved oxygen: 7.0 milligrams per liter minimum. Mercury: 2.4 micrograms per liter 1-hour average. Methylmercury: 0.05 milligrams per kilogram fish tissue (5–15 centimeters in length); 0.1 milligrams per kilogram fish (15–35 centimeters in length).	The project would result in minor disturbances to Guadalupe River to construct a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the channel of Guadalupe River, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Discharges of refuse from the construction site may exacerbate the trash impairment. Construction site BMPs and good housekeeping would avoid or minimize the potential for discharging refuse into Guadalupe River. Vegetation management may result in leaks, spills, or other discharges of pesticides to Guadalupe River. However, the Authority would not use diazinon for vegetation management.	Same as Alternative 1.		The Project would build a new bridge over Guadalupe River, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the widened crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and near the Guadalupe River, such as vegetation management and bridge maintenance, as well as continuous discharges of brake dust, PAHs, and other contaminants from trains. Discharges of refuse from the construction site may exacerbate the trash impairment. Construction site BMPs and good housekeeping would avoid or minimize the potential for discharging refuse into Guadalupe River. Vegetation management may result in leaks, spills, or other discharges of pesticides to Guadalupe River. However, the Authority would not use diazinon for vegetation management.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Palustrine Forested Wetland 6	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would result in minor disturbances to Palustrine Forested Wetland 6 in order to build a viaduct over Guadalupe River. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Palustrine Forested Wetland 6.	Same as Alternative 1.		The project would result in minor disturbances to Palustrine Forested Wetland 6 in order to build a new bridge over Guadalupe River. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Palustrine Forested Wetland 6.
Monterey Corridor Subsection					**Viaduct**	**At Grade**	**Viaduct**	**Blended, At-grade**
Constructed Basin 1	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would partially fill Constructed Basin 1 for the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	The project would have no impact on Constructed Basin 1 because it is not within the footprint of Alternative 4.
Constructed Watercourse 1	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would permanently relocate or fill Constructed Watercourse 1, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. If the waterbody is relocated, Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the watercourse, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 1 for construction access. This work may potentially result in erosion or discharge of polluted runoff. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.
Constructed Basin 10	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would result in minor disturbances to Constructed Basin 10 because it is located within a temporary construction easement. Nearby activities may potentially result in erosion or discharge of polluted runoff. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	The project would require filling the entire basin for curve straightening, requiring temporary diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Morgan Hill and Gilroy Subsection					**Viaduct to Downtown Gilroy**	**Embankment to Downtown Gilroy**	**Viaduct to East Gilroy**	**Blended, At-grade**
Coyote Alamitos Canal	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would have no impact on Coyote Alamitos Canal because it is not within the footprint of Alternative 1.	The project would have no impact on Coyote Alamitos Canal, because it would be protected during construction. Operations would avoid the canal.	Same as Alternative 1.	Same as Alternative 1.
Coyote Creek	San Francisco Bay	GWR, COMM, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2	Trash, diazinon, toxicity	Table 3-1, Table 3-2, and Table 3-4. Dissolved oxygen: 7.0 milligrams per liter minimum.	The project would modify the Metcalf Road bridge over Coyote Creek, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the modified bridge would change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Discharges of refuse from the construction site may exacerbate the trash impairment. Discharges of any pollutant from the construction site may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging refuse and other toxic contaminants into Coyote Creek. Vegetation management may result in leaks, spills, or other discharges of pesticides to Coyote Creek. However, the Authority would not use diazinon for vegetation management.	The project would modify the Metcalf Road bridge over Coyote Creek and the Fisher Creek culvert, requiring temporary stream diversion and dewatering, and provide a grade separation at the Bailey Avenue bridge. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the grade separation would change the path, speed, and volume of existing discharges and flows. Operations would avoid Coyote Creek. Discharges of refuse from the construction site may exacerbate the trash impairment. Discharges of any pollutant from the construction site may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging refuse and other toxic contaminants into Coyote Creek. Vegetation management may result in leaks, spills, or other discharges of pesticides to Coyote Creek. However, the Authority would not use diazinon for vegetation management.	Same as Alternative 1.	The project would require temporary stream diversion and dewatering of Coyote Creek in order to modify the Fisher Creek culvert and wildlife crossing. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the grade separation would change the path, speed, and volume of existing discharges and flows. Operations would avoid Coyote Creek. Discharges of refuse from the construction site may exacerbate the trash impairment. Discharges of any pollutant from the construction site may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging refuse and other toxic contaminants into Coyote Creek. Vegetation management may result in leaks, spills, or other discharges of pesticides to Coyote Creek. However, the Authority would not use diazinon for vegetation management.
Coyote Creek Reservoir	San Francisco Bay	AGR, COLD, FRESH, GWR, MIGR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would require filling a portion the reservoir to modify the Metcalf Road bridge over the Coyote Creek Reservoir, requiring temporary stream diversion and dewatering in Coyote Reservoir. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the modified bridge would change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would result in minor disturbances to the Coyote Creek Reservoir within the temporary construction easement at Bailey Avenue bridge. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Coyote Creek Reservoir.	Same as Alternative 1.	The project would have no impact on Coyote Creek Reservoir because it is not within the footprint of Alternative 4.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Coyote Creek Palustrine Forested Wetlands	San Francisco Bay	AGR, COLD, FRESH, GWR, MIGR, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would widen Monterey Road into Coyote Creek Palustrine Forested Wetlands, requiring temporary stream diversion and dewatering. A utility pipeline relocation would also temporarily disturb the wetland. This work may potentially result in erosion or discharge of polluted runoff. Grading for the widened crossing would change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains to Coyote Creek Palustrine Forested Wetlands.	The project would require temporary stream diversion and dewatering of the wetlands in order to build a wildlife crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Coyote Creek Palustrine Forested Wetlands.	Same as Alternative 1.	The project would temporarily disturb Coyote Creek Palustrine Forested Wetlands to construct wildlife crossings and a culvert in Fisher Creek, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Coyote Creek Palustrine Forested Wetlands.
Marsh 8	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Marsh 8 because it is not within the footprint of Alternative 1.	The project would result in minor disturbances to the marsh because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the marsh.	Same as Alternative 1.	The project would result in minor disturbances to the marsh during construction of a wildlife crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the marsh.
Constructed Watercourse 124	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would have no impact on Constructed Watercourse 124, because it would be protected during construction. Operations would avoid the watercourse.	Same as Alternative 1.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 124 because it is not within the footprint of Alternative 4.
Seasonal Wetland 14	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would result in minor disturbances to the wetland because it is located within a temporary construction easement associated with raising existing overhead electrical lines. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.	The project would have no impact on Seasonal Wetland 14, because it would be protected during construction. Operations would avoid the watercourse.	Same as Alternative 1.	The project would have no impact on Seasonal Wetland 14 because it is not within the footprint of Alternative 4.
Fisher Creek	San Francisco Bay	WARM, WILD, REC-1, REC-2	None listed.	Table 3-1, Table 3-2, and Table 3-4. Dissolved oxygen: 5.0 milligrams per liter minimum.	The project would temporarily disturb Fisher Creek to abandon, remove, and replace the existing culvert with a proposed wildlife crossing/culvert. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the channel, such as vegetation management and culvert maintenance as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	The project would construct a new culvert/wildlife crossing in Fisher Creek. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the channel, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Coyote Canal Extension	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would result in minor disturbances to Coyote Canal Extension, because of a proposed temporary roadway crossing required for PG&E network upgrades. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Coyote Canal Extension.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Constructed Watercourse 125	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would have no impact on Constructed Watercourse 125 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to the watercourse for construction access. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.
Constructed Watercourse 126	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would have no impact on Constructed Watercourse 126 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to the watercourse for construction access. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.
Seasonal Wetlands 15–16	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would involve a temporary roadway crossing for PG&E upgrades, requiring work in the wetlands. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetlands.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Coyote Canal	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would involve a temporary roadway crossing for PG&E network upgrades, requiring work in the canal, and temporary disturbances during installation of a nearby steel lattice tower. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Coyote Canal.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Coyote Creek Tributaries 1–8	San Francisco Bay	GWR, COMM, COLD, MIGR, RARE, SPWN, WARM, WILD, REC-1, REC-2	Trash, diazinon, toxicity	Table 3-1, Table 3-2, and Table 3-4. Dissolved oxygen: 7.0 milligrams per liter minimum.	The project would involve a temporary roadway crossings for these waterbodies to build PG&E upgrades, requiring work in tributaries 1, 5, 6, and 8. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these Coyote Creek tributaries.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Constructed Watercourse 127 and 129	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would involve a temporary roadway crossing for PG&E upgrades, requiring work in these watercourses. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these watercourses.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 161	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would have no impact on Constructed Watercourse 161 because it is not within the footprint of Alternative 1	The project would relocate the watercourse and build a culvert in the watercourse for the Live Oak Avenue grade separation, requiring work in the waterbody and temporary stream diversion and dewatering. Operations would avoid the watercourse.	Same as Alternative 1.	Same as Alternative 1.
Coyote Canal Tributary 1	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would involve a temporary roadway crossing for PG&E upgrades, requiring work in Coyote Canal Tributary 1. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the tributary.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Constructed Watercourse 130	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would have no impact on Constructed Watercourse 130 because it is not within the footprint of Alternative 1	The project would relocate or fill the watercourse to realign Monterey Road, requiring work in the waterbody and temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.
Cochran Channel	San Francisco Bay	None designated in the Basin Plan	None listed.	Table 3-4	The project would result in minor disturbances to Cochran Channel because it is within several utility temporary construction easements. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Cochran Channel.	The project would have no impact on Cochran Channel because it is not within the footprint of Alternative 2.	Same as Alternative 1.	Same as Alternative 2.
Constructed Basin 2	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Constructed Basin 2 because it is not within the footprint of Alternative 1.	The project would fill a portion of Constructed Basin 2 to construct an embankment for the Madrone Parkway grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new embankment would also change the path, speed, and volume of existing discharges and flows. Operations would avoid Constructed Basin 2.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Seasonal Wetland 18	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Seasonal Wetland 18 because it is not within the footprint of Alternative 1.	The project would fill a portion of Seasonal Wetland 18 to construct an embankment for the Madrone Parkway grade separation. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new embankment would also change the path, speed, and volume of existing discharges and flows. Operations would the wetland.	Same as Alternative 1.	Same as Alternative 1.
Constructed Basin 3	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Constructed Basin 3 because it is not within the footprint of Alternative 1.	The project would fill a portion of Constructed Basin 3 to relocate Monterey Road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid Constructed Basin 3.	Same as Alternative 1.	Same as Alternative 1.
Seasonal Wetland 17	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Seasonal Wetland 17 because it is not within the footprint of Alternative 1.	The project would result in minor disturbances to Seasonal Wetland 17 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.	Same as Alternative 1.	Same as Alternative 1.
Seasonal Wetland 1	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Seasonal Wetland 1 because it is not within the footprint of Alternative 1.	The project would partially fill Seasonal Wetland 1 for the relocation of Monterey Road, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid Seasonal Wetland 1.	Same as Alternative 1.	The project would result in minor disturbances to Seasonal Wetland 1, because it is within a temporary construction easement for construction access. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Seasonal Wetland 1.
Fisher Creek Tributary 1	San Francisco Bay	WARM, WILD, REC-1, REC-2	None listed.	Table 3-1, Table 3-2, and Table 3-4. Dissolved oxygen: 7.0 milligrams per liter minimum.	The project would have no impact on Fisher Creek Tributary 1 because it is not within the footprint of Alternative 1.	The project would result in minor disturbances to Fisher Creek Tributary 1, because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.	Same as Alternative 1.	The project would result in minor disturbances to Fisher Creek Tributary 1, because it is within a temporary construction easement for construction access. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Seasonal Wetland 2	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would construct a temporary roadway crossing over Seasonal Wetland 2 for PG&E network upgrades, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Seasonal Wetland 2.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
West Little Llagas Creek Tributary 1 and 2	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	The project would construct a temporary roadway crossing over West Little Llagas Creek Tributary 1 and 2 for PG&E network upgrades, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid West Little Llagas Creek Tributary 1 and 2.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Constructed Basin 11	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Constructed Basin 11 because it is not within the footprint of Alternative 1.	The project would completely fill Constructed Basin 11 to construct the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. This would also cause a depletion of water resources within the project extent. Operations would not affect Constructed Basin 11.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Basin 11, because it is within a temporary construction easement for construction access. This work may potentially result in erosion or discharge of polluted runoff. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.
Constructed Basin 4	San Francisco Bay / Central Coast	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	San Francisco Bay RWQCB: Table 3-4. Central Coast RWQCB: Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	The project would have no impact on Constructed Basin 4 because it is not within the footprint of Alternative 1.	The project would fill a portion of Constructed Basin 4 and offset capacity loss by expanding another portion of the basin, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Madrone Channel	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Madrone Channel, because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Madrone Channel.	The project would have no impact on Madrone Channel because it is not within the footprint of Alternative 2.	Same as Alternative 1.	Same as Alternative 2.
Butterfield Channel	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Butterfield Channel, because it is within temporary construction easements. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Butterfield Channel.	The project would relocate a portion of Butterfield Channel in order to construct the track embankment and reconstruct a culvert at Maple Avenue, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the channel, such as vegetation management and culvert maintenance as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	There would be no effect on Butterfield Channel because construction of the project would be confined to the paved areas on Main Avenue. Operations would avoid Butterfield Channel.
West Little Llagas Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to West Little Llagas Creek, because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid West Little Llagas Creek.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Seasonal Wetland 19	San Francisco Bay	AGR, COLD, FRESH, GWR, NAV, REC-1, REC-2, SPWN, WARM, WILD, RARE	None listed.	Table 3-4	The project would have no impact on Seasonal Wetland 19 because it is not within the footprint of Alternative 1.	The project would partially fill Seasonal Wetland 19 for maintenance access, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the channel, such as vegetation management and culvert maintenance as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.
Constructed Basin 5	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Basin 5 because it is not within the footprint of Alternative 1.	The project would result in minor disturbances to Constructed Basin 5, because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.
Constructed Basin 6	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Basin 6 because it is not within the footprint of Alternative 1.	The project would partially fill Constructed Basin 6 and expand another portion of the basin to offset capacity loss, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid the basin.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Little Llagas Creek	Central Coast	MUN, AGR, GWR, REC-1, REC-2, WILD, WARM, COMM	None listed.	Table 3-1, Table 3-2, Table 3-3, Table 3-4, Table 3-5 Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter Fecal coliform[1, 2] pH: 7.0 minimum, 8.3 maximum Phenol: 1.0 microgram per liter maximum Temperature: 5 degrees Fahrenheit increase maximum Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	The project would result in minor disturbances to Little Llagas Creek to construct a viaduct without piers inside the channel and new high-voltage utility crossings. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near Little Llagas Creek, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would construct a new culvert crossing for Little Llagas Creek, requiring work in the waterbody, and new high-voltage utility crossings. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Little Llagas Creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would extend the existing Little Llagas Creek culvert, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near Little Llagas Creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Llagas Creek	Central Coast	MUN, AGR, IND, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, RARE, COMM	Chloride, chlorpyrifos, electrical conductivity, E. coli, fecal coliform, low dissolved oxygen, sodium, nitrate, total dissolved solids, turbidity, sedimentation / siltation	Table 3-1, Table 3-2, Table 3-3, Table 3-4, Table 3-5, Table 3-7 Cadmium: 0.003 milligrams per liter in hard water,[3] 0.0004 milligrams per liter in soft water. Dissolved oxygen: shall not be reduced below 7.0 milligrams per liter. Fecal coliform[1, 2]. pH: 7.0 minimum, 8.3 maximum. Phenol: 1.0 microgram per liter maximum. Temperature: 5 degrees Fahrenheit increase maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	The project would result in minor disturbances to Llagas Creek to construct a viaduct without piers inside the channel and two new high-voltage utility crossings. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near Llagas Creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Leaks of pesticides from vegetation management during construction and operations may exacerbate the pesticides impairment. The Authority would not use chlorpyrifos for vegetation management; however, reduced shading would result from ongoing vegetation management during operations, resulting in decreased dissolved oxygen levels. Increased iron from brake dust, PAHs, may also exacerbate the low dissolved oxygen impairment through the stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the E. coli and fecal coliform impairments. However, construction site BMPs would avoid or minimize the potential for discharging sanitary waste. Work in and near Llagas Creek during construction, bridge/culvert maintenance, and discharges of brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Discharges of brake dust, PAHs, may also exacerbate the electrical conductivity and dissolved solids impairments.	The project would remove the existing railroad bridge, relocate Monterey Road to cross Llagas Creek to the west of the existing crossing, modify the Upper Llagas Creek Flood Protection Project in coordination with the Santa Clara Valley Water District, and add a new crossing for the West San Martin Avenue grade separation, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Llagas Creek, such as vegetation management and culvert/bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Leaks of pesticides from vegetation management during construction and operations may exacerbate the pesticides impairment. The Authority would not use chlorpyrifos for vegetation management; however, reduced shading would result from ongoing vegetation management during operations, resulting in decreased dissolved oxygen levels. Increased iron from brake dust, PAHs, may also exacerbate the low dissolved oxygen impairment through the stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the E. coli and fecal coliform impairments. However, construction site BMPs would avoid or minimize the potential for discharging sanitary waste. Work in and near Llagas Creek during construction, bridge/culvert maintenance, and discharges of brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Discharges of brake dust, PAHs, may also exacerbate the electrical conductivity and dissolved solids impairments.	The project would construct a new viaduct crossing over Llagas Creek, a new bridge crossing with piers in the channel requiring work in the waterbody, and two new high-voltage utility crossings over Llagas Creek. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossings would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Llagas Creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Leaks of pesticides from vegetation management during construction and operations may exacerbate the pesticides impairment. The Authority would not use chlorpyrifos for vegetation management; however, reduced shading would result from ongoing vegetation management during operations, resulting in decreased dissolved oxygen levels. Increased iron from brake dust, PAHs, may also exacerbate the low dissolved oxygen impairment through the stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the E. coli and fecal coliform impairments. However, construction site BMPs would avoid or minimize the potential for discharging sanitary waste. Work in and near Llagas Creek during construction, bridge/culvert maintenance, and discharges of brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Discharges of brake dust, PAHs, may also exacerbate the electrical conductivity and dissolved solids impairments.	The project would reconstruct the existing Llagas Creek culvert, requiring work in the waterbody, and construct a new high voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Llagas Creek, such as vegetation management and culvert/bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Leaks of pesticides from vegetation management during construction and operations may exacerbate the pesticides impairment. The Authority would not use chlorpyrifos for vegetation management; however, reduced shading would result from ongoing vegetation management during operations, resulting in decreased dissolved oxygen levels. Increased iron from brake dust, PAHs, may also exacerbate the low dissolved oxygen impairment through the stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the E. coli and fecal coliform impairments. However, construction site BMPs would avoid or minimize the potential for discharging sanitary waste. Work in and near Llagas Creek during construction, bridge/culvert maintenance, and discharges of brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Discharges of brake dust, PAHs, may also exacerbate the electrical conductivity and dissolved solids impairments.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Basin 7	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would fill a portion of Constructed Basin 7 within the proposed right-of-way, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	The project would have no impact on Constructed Basin 7 because it is not within the footprint of Alternative 4.
West Branch Llagas Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would extend the existing box culvert, requiring work in the waterbody, and construct three new high-voltage utility crossings over West Branch Llagas Creek. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near West Branch Llagas Creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would extend the existing box culvert and construct a new crossing at the Masten Avenue grade separation, requiring work in the waterbody, and construct three new high-voltage utility crossings over West Branch Llagas Creek. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near West Branch Llagas Creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would result in minor disturbances to West Branch Llagas Creek to construct a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid West Branch Llagas Creek.	The project would use the existing West Branch Llagas Creek culvert and result in minor disturbances within temporary construction easements for utility and PG&E network upgrades. This work may potentially result in erosion or discharge of polluted runoff. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.
West Branch Llagas Creek Tributary 1	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a temporary roadway crossing for PG&E network upgrades, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid West Branch Llagas Creek Tributary 1.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 3	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 3 because it is not within the footprint of Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 3, because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 3.	Same as Alternative 1.	Same as Alternative 1.
Constructed Watercourse 131	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a viaduct over Constructed Watercourse 131 and relocate the waterbody around a viaduct pier, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 131, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would relocate or provide a culvert for a proposed cul-de-sac and build a new crossing at realigned Monterey Road for the Masten Avenue grade separation, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 131, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains	The project would have no impact on Constructed Watercourse 131 because it is not within the footprint of Alternative 3.	The project would result in minor disturbances to Constructed Watercourse 131, because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.
Constructed Watercourse 132	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 132 because it is not within the footprint of Alternative 1.	The project would relocate the watercourse around a proposed pump station, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid the watercourse.	The project would have no impact on Constructed Watercourse 132 because it is not within the footprint of Alternative 3	Same as Alternative 3.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Upper Miller Slough	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new viaduct crossing and armor the channel to protect the viaduct piers on the top of the bank, requiring work in the waterbody, as well as construct a new high-voltage utility crossing over Upper Miller Slough. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Upper Miller Slough, such as vegetation management and culvert/bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would relocate Upper Miller Slough to cross below the track embankment and add several new culverts, requiring work in the waterbody, as well as construct a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Upper Miller Slough, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would result in minor disturbances to Upper Miller Slough to construct a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Upper Miller Slough.	The project would remove and replace the existing bridge over Upper Miller Slough with a 3-cell box culvert with 10-ft wide and 7-ft high cells, requiring work in the waterbody. New utility crossings would also be constructed. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Upper Miller Slough, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.
Lower Miller Slough	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Lower Miller Slough because it is within temporary construction easements. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Lower Miller Slough.	The project would have no impact on Lower Miller Slough because it is not within the footprint of Alternative 2.	The project would result in minor disturbances to Lower Miller Slough to construct a new utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Lower Miller Slough.	Same as Alternative 2.
Palustrine Forested Wetland 7 and 9	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Palustrine Forested Wetland 7 and 9 because they are not within the footprint of Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Palustrine Forested Wetland 7 and 9 to construct new utility crossings. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Lower Miller Slough.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Princevalle Channel	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Princevalle Channel to construct a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the waterbody, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would extend the existing Princevalle Channel culvert, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the waterbody, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	The project would have no impact on Princevalle Channel because it is not within the footprint of Alternative 3.	Same as Alternative 2.
Dexter Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Dexter Creek because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would construct two new culverts in Dexter Creek for the SR 152 grade separation and add a culvert for a farm access road, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation and farm access road would also change the path, speed, and volume of existing discharges and flows. Operations would avoid Dexter Creek.	Same as Alternative 1.
Marsh 1	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Marsh 1 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would completely fill Marsh 1 to construct the East Gilroy MOWF. This work may potentially result in erosion or discharge of polluted runoff. Operations would not affect Marsh 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Jones Creek	Central Coast	None designated in the Basin Plan	Chlorpyrifos, E. coli, fecal coliform, nitrate, turbidity	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. Fecal coliform[1]. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Joens Creek because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would relocate the Jones Creek channel along the northeastern boundary of the East Gilroy MOWF and cross the track below a proposed viaduct, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and East Gilroy MOWF would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Jones Creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Leaks of pesticides from vegetation management during construction and operations would not exacerbate the chlorpyrifos impairment, because the Authority would not use chlorpyrifos during construction and operations. Construction site BMPs would avoid or minimize potential discharges of sanitary waste from the construction site. Work in and near Jones Creek during construction, bridge maintenance, and the release of brake dust, PAHs, and other contaminants from trains may exacerbate the turbidity and sedimentation impairments. However, construction site BMPs would minimize the potential for discharging sediment to the creek during the construction and operations.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
San Ysidro Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on San Ysidro Creek because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would add a culvert for a farm access road and connect the creek to the relocated Jones Creek channel, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and channel modifications for the East Gilroy MOWF and farm access road would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the waterbody.	Same as Alternative 1.
Constructed Watercourse 4	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 4 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would relocate Constructed Watercourse 4 along the proposed farm access road. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and relocating the channel for the farm access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Constructed Watercourse 4, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 5	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 5 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 5 to construct a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges to and existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 5, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.
Constructed Watercourse 6	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 6 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would add a culvert for a proposed farm access road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the farm access road would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.	Same as Alternative 1.
Constructed Basin 12 and 13	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Basin 12 and 13 because they are not within the footprint of Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	The project would require completely filling these constructed basins to build the railbed leading to the South Gilroy MOWF, requiring temporary stream diversion, dewatering, and work in the waterbodies. This work may potentially result in erosion or discharge of polluted runoff. Operations would not affect these basins.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 7	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct new culverts in Constructed Watercourse 7 and the waterbody would be partially filled for construction of a retaining wall, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 7, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 7 because it is not within the footprint of Alternative 3.	Same as Alternative 3.
Gilroy Wastewater Treatment Ponds	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would fill a portion of the Gilroy Wastewater Treatment Ponds to construct the railbed leading to the South Gilroy MOWF, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these waterbodies would change the areas and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on the Gilroy Wastewater Treatment Ponds because they are not within the footprint of Alternative 3.	Same as Alternative 3.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 156	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would relocate, fill, or culvert the watercourse to build the South Gilroy MOWF, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these waterbodies would change the areas and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 156, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 156 because it is not within the footprint of Alternative 3.	Same as Alternative 3.
Constructed Watercourse 8	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 8 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 8.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 8 construct a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 8.	Same as Alternative 3.
Constructed Watercourse 9	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 9 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 9 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 9.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 10	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 10 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would construct a new culvert within Constructed Watercourse 10, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 10, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.
Constructed Watercourse 11	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 11 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would involve construction of a new culvert within Constructed Watercourse 11, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 11, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 12	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 12 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 12, which would be protected in place during construction. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near Constructed Watercourse 12, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pajaro River	Central Coast	MUN, AGR, IND, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, FRESH, COMM	Boron, chlordane, chloride, chlorpyrifos, DDD, DDE, DDT, diazinon, dieldrin, E. coli, fecal coliform, low dissolved oxygen, nitrate, nutrients, PCBs, pH, sodium, toxicity, turbidity, nitrate, sedimentation / siltation	Table 3-1, Table 3-2, Table 3-3, Table 3-4, Table 3-5, Table 3-7 Cadmium: 0.003 milligrams per liter in hard water[3], 0.0004 milligrams per liter in soft water Dissolved oxygen: shall not be reduced below 7.0 milligrams per liter Fecal coliform[1, 2] pH: 7.0 minimum, 8.3 maximum Phenol: 1.0 microgram per liter maximum Temperature: 5 degrees Fahrenheit increase maximum Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	The project would construct a new viaduct crossing with a pier footing within the channel banks, requiring temporary stream diversion and dewatering, and a new high-voltage utility crossing over Pajaro River. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossings would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pajaro River, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Leaks of pesticides from vegetation management during construction and operations may result in discharges of pesticides to Pajaro River. However, the Authority would not use chlorpyrifos, chlordane, DDD, DDE, DDT, diazinon, and dieldrin during construction and operations. Vegetation management, reduced shading over Pajaro River, and discharges of iron from brake dust, PAHs, may also exacerbate the low dissolved oxygen impairment through increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the E. coli and fecal coliform impairments. Work in and near Pajaro River during construction, vegetation management, bridge/culvert maintenance, and discharges from brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Accidental discharges of any pollutant may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste, sediment, and accidental discharges. Construction of the concrete viaduct structures may temporarily contribute to elevated pH.	Same as Alternative 1.	The project would construct a new viaduct crossing over Pajaro River without piers within the channel, a new high-voltage utility crossing, and a new crossing at Lake Road. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossings would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pajaro River, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Leaks of pesticides from vegetation management during construction and operations may result in discharges of pesticides to Pajaro River. Vegetation management, reduced shading over Pajaro River, and discharges of iron from brake dust, PAHs, may also exacerbate the low dissolved oxygen impairment through increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the E. coli and fecal coliform impairments. Work in and near Pajaro River during construction, vegetation management, bridge/culvert maintenance, and discharges from brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Accidental discharges of any pollutant may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste, sediment, and accidental discharges. Construction of the concrete viaduct structures may temporarily contribute to elevated pH.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 133	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 133 due to construction of a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 133.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Constructed Watercourse 13	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 13 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 13.	Same as Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 13 to construct a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 13.
Seasonal Wetland 4	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would partially fill Seasonal Wetland 4 for the Bloomfield Avenue grade separation, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would avoid Seasonal Wetland 4.	Same as Alternative 1.	The project would have no impact on Seasonal Wetland 4 because it is not within the footprint of Alternative 3.	Same as Alternative 3.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Uvas-Carnadero Creek	Central Coast	Uvas Creek: MUN, AGR, IND, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, RARE, COMM Carnadero Creek: MUN, GWR, REC-1, REC-2, WILD, COLD, MIGR, RARE, COMM	Uvas Creek: low dissolved oxygen, turbidity Carnadero Creek: E. coli, fecal coliform, low dissolved oxygen, nitrate, turbidity	Table 3-1, Table 3-2, Table 3-5 Dissolved oxygen: shall not be reduced below 7.0 milligrams per liter Fecal coliform[1, 2] pH: 7.0 minimum, 8.3 maximum Phenol: 1.0 microgram per liter maximum Temperature: 5 degrees Fahrenheit increase maximum Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	The project would result in minor disturbances to Uvas Creek to construct a new roadway crossing along relocated Bloomfield Avenue without columns inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would avoid Uvas Creek. Vegetation management during construction may exacerbate the low dissolved oxygen impairment from reduced shading. Work in and near Uvas Creek during construction may exacerbate the turbidity impairment. However, construction site BMPs would avoid or minimize discharges of sediment from the construction site.	Same as Alternative 1.	The project would have no impact on Uvas Creek because it is not within the footprint of Alternative 3.	Same as Alternative 3.
Uvas-Carnadero Creek Palustrine Forested Wetlands	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new roadway crossing along relocated Bloomfield Avenue with piers in the wetland, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would avoid Uvas-Carnadero Creek Palustrine Forested Wetlands.	Same as Alternative 1.	The project would have no impact on Uvas-Carnadero Creek Palustrine Forested Wetlands because it is not within the footprint of Alternative 3.	Same as Alternative 3.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 14	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would relocate Constructed Watercourse 14 along the toe of the embankment for the Bloomfield Avenue grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would avoid Uvas-Carnadero Creek Palustrine Forested Wetlands. Operations would avoid Constructed Watercourse 14.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 14 because it is not within the footprint of Alternative 3.	Same as Alternative 3.
Palustrine Forested Wetland 8	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would partially fill Palustrine Forested Wetland 8 for the Bloomfield Avenue grade separation, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the wetland, such as vegetation management.	Same as Alternative 1.	The project would have no impact on Palustrine Forested Wetland 8 because it is not within the footprint of Alternative 3.	Same as Alternative 3.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 135	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would fill Constructed Watercourse 135 within the proposed HSR right-of-way, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the embankment would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 135 because it is not within the footprint of Alternative 3.	The project would fill the watercourse within the limits of the South Gilroy MOWF or relocate the waterbody to be outside the proposed South Gilroy MOWF. This work would require temporary stream diversion, dewatering, and work in the waterbody, which may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the MOWF would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.
Constructed Watercourse 15	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Wetland 15 because it is within temporary construction easements. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.	Same as Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 15 to construct a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 15.
Seasonal Wetland 5	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Seasonal Wetland 5 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	The project would result in minor disturbances to Seasonal Wetland 5 because it is within the existing Hollister Freight Branch railroad right-of-way. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the wetland, such as vegetation management.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 16	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct new culverts and relocate a portion of Constructed Watercourse 16, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 16, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 16 because it is not within the footprint of Alternative 3.	The project would relocate a portion of Constructed Watercourse 16 and cross the South Gilroy MOWF in a new culvert, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 16, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.
Pajaro River Palustrine Forested Wetlands	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new viaduct crossing over Pajaro River Palustrine Forested Wetlands with piers in the wetland, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pajaro River Palustrine Forested Wetlands, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Pajaro River Palustrine Forested Wetlands because it is not within the footprint of Alternative 3.	Same as Alternative 1.
Constructed Watercourse 157 and 158	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to the watercourses because they are located within a temporary constructed easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourses.	Same as Alternative 1.	The project would result in minor disturbances to the watercourses due to the construction of a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourses.	Same as Alternative 3.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 159	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 159 watercourses due to the construction of a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Constructed Watercourse 17	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would relocate Constructed Watercourse 17 around a proposed viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Constructed Watercourse 17, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 17 because it is not within the footprint of Alternative 3.	Same as Alternative 1.
Constructed Watercourse 18	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 18 because it is within a staging area. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 18.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 18 because it is not within the footprint of Alternative 3.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 19	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 19 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 19.	Same as Alternative 1.	The project would have no impact on Constructed Watercourse 19 because it is not within the footprint of Alternative 3.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Millers Canal	Central Coast	None designated in the Basin Plan	Chlorophyll-a, E. coli, fecal coliform, low dissolved oxygen, nitrate, pH, temperature, toxicity, turbidity	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new viaduct crossing with a pier inside the channel banks, requiring temporary stream diversion and dewatering, and a new utility crossing over Millers Canal. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Millers Canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Reduced shading over Millers Canal from vegetation management and discharges of iron from brake dust, PAHs, may exacerbate the low dissolved oxygen impairment through increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the fecal coliform impairment. Construction near or in Millers Canal, vegetation management during construction and operations, and discharges of brake dust, PAHs, and other contaminants from trains may exacerbate the turbidity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste and sediment during the construction phase. Construction of the concrete viaduct structure may temporarily exacerbate the pH impairment.	Same as Alternative 1.	The project would construct a new viaduct crossing, a new culvert or bridge requiring temporary stream diversion and dewatering, and a new high-voltage utility crossing over Millers Canal. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Millers Canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Reduced shading over Millers Canal from vegetation management and discharges of iron from brake dust, PAHs, may exacerbate the low dissolved oxygen impairment through increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the fecal coliform impairment. Construction near or in Millers Canal, vegetation management during construction and operations, and discharges of brake dust, PAHs, and other contaminants from trains may exacerbate the turbidity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste and sediment during the construction phase.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 134	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 134 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would construct a viaduct over the watercourse and relocate the watercourse to cross below the viaduct at a perpendicular angle, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Grading to relocate the channel would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.
Constructed Watercourse 136	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 136 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would construct a viaduct over the watercourse and relocate the watercourse to flow around a viaduct pier, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Grading to relocate the channel would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 137	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a viaduct over the watercourse and relocate the watercourse to flow around a viaduct pier, requiring temporary stream diversion, dewatering, and work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Grading to relocate the channel would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 137 due to construction of a new high-voltage utility line. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 137.	Same as Alternative 1.
Constructed Watercourse 20, 21, and 22	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would build a viaduct over Constructed Watercourse 20, 21, and 22 and relocate the watercourses around proposed viaduct piers, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near watercourses, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on the watercourses because they are not within the footprint of Alternative 3.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 23	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would build a viaduct over Constructed Watercourse 23, relocate the watercourse around a proposed viaduct pier, which would require temporary stream diversion and dewatering, and build a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Constructed Watercourse 23, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would result in minor disturbances to Constructed Watercourse 23 due to construction of a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Watercourse 12.	Same as Alternative 1.
Marsh 2	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Marsh 2 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would partially fill Marsh 2 for improvements along Lake Road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid Marsh 2.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 25	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 25 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would construct a culvert within Constructed Watercourse 25, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid Constructed Watercourse 25.	Same as Alternative 1.
Constructed Watercourse 138	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 138 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would build a viaduct over Constructed Watercourse 138 and relocate the watercourse around a proposed viaduct pier, which would require temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Constructed Watercourse 138, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 26	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a culvert within Constructed Watercourse 26, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 26, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would relocate Constructed Watercourse 26 around a proposed viaduct pier and construct new culverts for access roads, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and access roads would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Constructed Watercourse 26, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.
Tequisquita Slough, Tequisquita Slough Ponds 1 and 2, Tequisquita Slough Marsh, Tequisquita Slough Seasonal Wetlands 1 and 2	Central Coast	GWR, REC-1, REC-2, WILD, WARM, SPWN, COMM	Ammonia, chlorophyll-a, fecal coliform, low dissolved oxygen, pH, toxicity, turbidity	Table 3-5 Cadmium: 0.003 milligrams per liter in hard water[3], 0.0004 milligrams per liter in soft water Dissolved oxygen: shall not be reduced below 7.0 milligrams per liter Fecal coliform[1, 2] pH: 7.0 minimum, 8.3 maximum Phenol: 1.0 microgram per liter maximum Temperature: 5 degrees Fahrenheit increase maximum Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU	The project would construct an embankment within Tequisquita Slough Pond 1 with equalizer culverts to allow flood flows to pass through the embankment. Additionally, an area would be excavated so surface water can flow around the embankment and cross below a viaduct section. This work would require temporary stream diversion and dewatering. A new high-voltage utility line would be constructed over the marsh and seasonal wetland 2, resulting in minor disturbances. All of this work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near these waterbodies, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Tequisquita Slough, pond 2, and seasonal wetland 1 would not be impacted because	Same as Alternative 1.	The project would construct an embankment within Tequisquita Slough with equalizer culverts to allow flood flows to pass through the embankment. Additionally, an area would be excavated so surface water can flow around the embankment and cross below a viaduct section. Pond 2, the marsh, and seasonal wetland 1 would also be partially filled for the track embankment. A new high-voltage utility would be constructed over seasonal wetland 2. All of this work would require temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these waterbodies would change their slopes, affecting the path, speed, and volume of existing discharges into the waterbodies. These modifications would also affect the path, speed, and volume of existing flows within	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
				Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	they are not within the footprint of Alternative 1. Reduced shading over the waterbodies from vegetation management and discharges of iron from brake dust may exacerbate the low dissolved oxygen impairment through increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the fecal coliform impairment. Work in and near the waterbodies during construction, vegetation management, and discharges from brake dust and PAHs may exacerbate the turbidity impairment. Construction of the concrete viaduct structures may exacerbate the pH impairment. Accidental discharges of any pollutant may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste, sediment, and alkalinity associated with concrete, and accidental leaks and spills during the construction phase.		the waterbodies. Grading and fill for the new crossings would also change the path, speed, and volume of existing discharges to and existing flows within all waterbodies. Operations would include intermittent work in or near these waterbodies such as vegetation management, and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Tequisquita Slough Pond 1 would not be impacted because it is not within the footprint of Alternative 3. Reduced shading over these waterbodies from vegetation management and discharges of iron from brake dust may exacerbate the low dissolved oxygen impairment through increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the fecal coliform impairment. Work in and near the waterbodies during construction, vegetation management, and discharges of brake dust and PAHs may exacerbate the turbidity impairment. Construction of the concrete viaduct structures may exacerbate the pH impairment. Accidental discharges of any pollutant may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste, sediment, and alkalinity associated with concrete, and accidental leaks and spills during the construction phase.	

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 27	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Constructed Watercourse 27 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would construct a new culvert within Constructed Watercourse 27, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Watercourse 27, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.
Pacheco Creek	Central Coast	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, MIGR, SPWN, BIOL, RARE, FRESH, COMM	Fecal coliform, low dissolved oxygen, turbidity	Table 3-1, Table 3-2, Table 3-3, Table 3-4, Table 3-5 Cadmium: 0.003 milligrams per liter in hard water[3], 0.0004 milligrams per liter in soft water Dissolved oxygen: shall not be reduced below 7.0 milligrams per liter Fecal coliform[1, 2] pH: 7.0 minimum, 8.3 maximum Phenol: 1.0 microgram per liter maximum Temperature: 5 degrees Fahrenheit increase maximum Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	The project would construct new viaduct crossings with piers in the channel or on the banks, new tunnel crossings, and a new high-voltage utility crossing over Pacheco Creek. Additionally, some cut/fill may be required within the creek banks in order to build an embankment and minimize landslide risk. This work would require temporary stream diversion and dewatering, and it could potentially result in erosion or discharge of polluted runoff. Tunnel construction may affect the hydrology of Pacheco Creek through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Grading and fill for the new crossings would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pacheco Creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Reduced shading over Pacheco Creek from vegetation management and discharges of iron from brake dust, PAHs, may exacerbate the low dissolved oxygen impairment through	Same as Alternative 1.	The project would construct a new viaduct crossing with piers in the channel or on the banks, new tunnel crossings, and high-voltage utility crossings. Additionally, some cut/fill may be required within the creek banks in order to build an embankment and minimize landslide risk. This work would require temporary stream diversion and dewatering, and it could potentially result in erosion or discharge of polluted runoff. Tunnel construction may affect the hydrology of Pacheco Creek through a lowering of the groundwater table. Project features require minimizing groundwater withdrawal and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Grading and fill for the new crossings would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pacheco Creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
					increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the fecal coliform impairment. Work in and near Pacheco Creek during construction, vegetation management, bridge maintenance, and discharges from brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Accidental discharges of any pollutant may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste and sediment and accidental spills during the construction phase.		dust, PAHs, and other contaminants from trains. Vegetation management, reduced shading over Pacheco Creek, and discharges of iron from brake dust, PAHs, may exacerbate the low dissolved oxygen impairment through increased water temperatures and stimulation of microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the fecal coliform impairment. Work in and near Pacheco Creek during construction, vegetation management, bridge maintenance, and discharges from brake dust, PAHs, may exacerbate the turbidity and sedimentation impairments. Accidental discharges of any pollutant may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste and sediment and accidental spills during the construction phase.	
Pacheco Creek Tributary 1	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would relocate Pacheco Creek Tributary 1 around a proposed viaduct pier, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pacheco Creek Tributary 1, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Pacheco Creek Tributary 1 because it is not within the footprint of Alternative 3.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Seasonal Wetland 7	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new viaduct crossing over Seasonal Wetland 7, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Seasonal Wetland 7, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Seasonal Wetland 7 because it is not within the footprint of Alternative 3.	Same as Alternative 1.
Marsh 4	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new utility crossing over Marsh 4, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Marsh 4.	Same as Alternative 1.	The project would partially fill Marsh 4 for the track embankment and construct a new viaduct crossing, requiring temporary stream diversion and dewatering. A new high-voltage utility crossing would also be constructed over Marsh 4. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Marsh 4, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Seasonal Wetland 8	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new utility crossing over Seasonal Wetland 8 and a new viaduct crossing with piers in the wetland, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Seasonal Wetland 8, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would partially fill Seasonal Wetland 8 for the track embankment and construct a new viaduct crossing with piers in the wetland, requiring work in the waterbody. A new high-voltage utility crossing would also be constructed over Seasonal Wetland 8. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges to and existing flows within the waterbody. Operations would include intermittent work in or near Seasonal Wetland 8 such as vegetation management and culvert/bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.
Constructed Watercourse 28	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 28 during construction of a new utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Constructed Wetland 28.	Same as Alternative 1.	The project would construct a new culvert within Constructed Watercourse 28, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Constructed Wetland 28, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Palustrine Forested Wetland 10	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would build a viaduct over Palustrine Forested Wetland 10 with a pier in the wetland, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the wetland such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	The project would have no impact on Palustrine Forested Wetland 10 because it is not within the footprint of Alternative 3.	Same as Alternative 1.
Palustrine Forested Wetland 2	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would have no impact on Palustrine Forested Wetland 2 because it is not within the footprint of Alternative 1.	Same as Alternative 1.	The project would partially fill Palustrine Forested Wetland 2 for the track embankment, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would result in continuous discharges of brake dust and other contaminants from trains.	Same as Alternative 1.
Marsh 5	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Marsh 5 during construction of a new utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Marsh 5.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 29	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would relocate and construct a new culvert within Constructed Watercourse 29, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the waterbody, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1	The project would have no impact on Constructed Watercourse 29 because it is not within the footprint of Alternative 3.	Same as Alternative 1
Constructed Watercourse 30	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would relocate Constructed Watercourse 30, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid Constructed Watercourse 30.	Same as Alternative 1	The project would relocate Constructed Watercourse 30 along the northern toe of the track embankment and to cross below a proposed viaduct, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Constructed Watercourse 30, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Seasonal Wetland 9	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new utility crossing over Seasonal Wetland 9, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Seasonal Wetland 9.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Ortega Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would install temporary roadway crossings within the creek during construction, requiring work in the waterbody, and construct four new high-voltage utility crossings over Ortega Creek. This work may potentially result in erosion or discharge of polluted runoff. Groundwater inflows during tunnel construction may affect the hydrology of Ortega Creek's tributaries, resulting in altered stream flows in Ortega Creek. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would avoid the creek.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Seasonal Wetland 10	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Seasonal Wetland 10 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Ortega Creek Tributary 1	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Ortega Creek Tributary 1 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Ortega Creek Tributary 2	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Ortega Creek Tributary 2 during construction of a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Ortega Creek Tributary 3	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Ortega Creek Tributary 3 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Ortega Creek Tributary 4	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would temporarily impact the hydrology of Ortega Creek Tributary 4 from tunnel construction. Groundwater inflows during tunnel construction may affect the hydrology of Ortega Creek Tributary 4 through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would avoid the waterbody.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Ortega Creek Tributary 5	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would temporarily impact the hydrology of Ortega Creek Tributary 5 from tunnel construction. Groundwater inflows during tunnel construction may affect the hydrology of Ortega Creek Tributary 5 through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Additionally, the project may permanently modify the creek to minimize landslide risk, depending on the final grading plan. Permanent modifications to the waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody, and it would require work to be performed within the waterbody. This work may potentially result in erosion or discharge of polluted runoff, and the modifications may affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Ortega Creek Tributary 5, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Ortega Creek Tributary 6	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify Ortega Creek Tributary 6 due to earthwork required to minimize landslide risk, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Ortega Creek Tributary 6, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Ortega Creek Tributary 7	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Ortega Creek Tributary 7 because it is within a staging area. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Ortega Creek Tributary 8, 9, 10, and 11	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify these creeks due to earthwork required to minimize landslide risk, requiring work in the waterbodies. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these waterbodies would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creeks, such as vegetation management.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Ortega Creek Tributary 13, 14, and 15	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to these creeks due to construction of new high-voltage utility crossings. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these creeks.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Pond 2	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify Pond 2 due to earthwork required to minimize landslide risk, requiring work in the pond. This work may potentially result in erosion or discharge of polluted runoff. Modifications to pond would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid the pond.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Pond 3	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would install a temporary roadway crossing over Pond 3, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the waterbody.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

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Pacheco Creek Tributary 2 and 3	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would temporarily impact the hydrology of Pacheco Creek Tributary 2 and 3 from tunnel construction. Groundwater inflows during tunnel construction may affect the hydrology of these creeks through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would avoid the waterbody.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Pacheco Creek Tributary 4	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would temporarily impact the hydrology of Pacheco Creek Tributary 4 from tunnel construction and permanently modify the waterbody for landslide minimization, requiring work in the waterbody. Groundwater inflows during tunnel construction may affect the hydrology of Pacheco Creek Tributary 4 through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Permanent modifications to the waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody, and it would require work to be performed within the waterbody. This work may potentially result in erosion or discharge of polluted runoff, and the modifications may affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Pacheco Creek Tributary 4, such as vegetation management.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pond 4, 5, and 13	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify these ponds to minimize landslide risk, requiring work in the ponds. Permanent modifications to the ponds would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody, and it would require work to be performed within the waterbody. This work may potentially result in erosion or discharge of polluted runoff, and the modifications may affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid the ponds.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Pacheco Creek Tributary 56	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Pacheco Creek Tributary 56 due to construction of a new high-voltage utility crossing. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pacheco Creek Tributary 5	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would temporarily impact the hydrology of Pacheco Creek Tributary 5 from tunnel construction , install a new culvert at the tunnel portal, and permanently modify the creek to minimize landslide risk. Groundwater inflows during tunnel construction may affect the hydrology of Pacheco Creek Tributary 5 through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Permanent modifications to the waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody, and it would require work to be performed within the waterbody. This work may potentially result in erosion or discharge of polluted runoff, and the modifications may affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Pacheco Creek Tributary 5, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Pacheco Creek Tributary 6	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would involve construction of a new culvert at a proposed access road, a new culvert at the tunnel portal, and permanent modifications due to earthwork required to minimize landslide risk, all of which would require work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pacheco Creek Tributary 6, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pacheco Creek Tributary 31 and 32	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify these creeks to minimize landslide risk, requiring work in the creeks. Permanent modifications to the ponds would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody, and it would require work to be performed within the waterbody. This work may potentially result in erosion or discharge of polluted runoff, and the modifications may affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creeks, such as vegetation management.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Pacheco Creek Palustrine Forested Wetlands 2	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new viaduct crossing with piers in the wetland, requiring work in the waterbody, and new high-voltage utility crossings over Pacheco Creek Palustrine Forested Wetlands 2. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near Pacheco Creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Constructed Watercourse 31	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Constructed Watercourse 31 from construction of a new high-voltage utility line over the waterbody, and it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the waterbody.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pacheco Creek Tributary 7 and 8	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Pacheco Creek Tributary 7 and 8 from construction of a new high-voltage utility line. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these creek s.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
Pacheco Pass Subsection								
Pacheco Creek	Central Coast	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, MIGR, SPWN, BIOL, RARE, FRESH, COMM	Fecal coliform, low dissolved oxygen, turbidity	Table 3-1, Table 3-2, Table 3-4, Table 3-5, Table 3-7 Cadmium: 0.003 milligrams per liter in hard water[3], 0.0004 milligrams per liter in soft water Dissolved oxygen: shall not be reduced below 7.0 milligrams per liter Fecal coliform[1, 2] pH: 7.0 minimum, 8.3 maximum Phenol: 1.0 microgram per liter maximum Temperature: 5 degrees Fahrenheit increase maximum Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum	See entry for Pacheco Creek under the Morgan Hill and Gilroy subsection.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pond 6	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify Pond 6 due to earthwork required to minimize landslide risk, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near Pond 6, such as vegetation management.			
Pacheco Creek Tributary 9	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new culvert within Pacheco Creek Tributary 9, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent activities in or near the creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Pacheco Creek Tributary 10	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify Pacheco Creek Tributary 10 due to earthwork required to minimize landslide risk, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent activities in or near the creek, such as vegetation management.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Carmen Creek and Carmen Creek Tributary 1	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would install one temporary roadway crossing, requiring work in the waterbody, and a new high-voltage utility line over the creek. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Carmen Creek.			
Pacheco Creek Tributary 33, 34, 35, 36, 38, 39, and 40	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify these creeks due to earthwork required to minimize landslide risk, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent activities in or near the creeks, such as vegetation management. Operations would also result in continuous discharges of brake dust, PAHs, and other contaminants from trains into Pacheco Creek Tributary 38.			
Pacheco Creek Tributary 37 and 41	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Pacheco Creek Tributary 37 and 41 because they are located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these creeks.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pond 7, 8, and 9	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify Pond 7, 8, and 9 due to earthwork required to minimize landslide risk, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid these ponds.			
Pacheco Creek Tributary 42	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Pacheco Creek Tributary 42 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.			
Pacheco Creek Tributary 11 and 12	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would install temporary roadway crossings, requiring work in the waterbodies, and a new high-voltage utility line over the creeks. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Pacheco Creek Tributary 11 and 12.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pacheco Creek Tributary 13 and 14	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct new culverts within Pacheco Creek Tributary 13 and 14, requiring work in the waterbodies. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these waterbodies would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbodies. Operations would include intermittent work in or near the creeks, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Pacheco Creek Tributary 15	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Pacheco Creek Tributary 15 because it is within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the waterbody.			
Pacheco Creek Tributary 16	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a new culvert in the creek, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the waterbody, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 139	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to the watercourse during construction of a new high-voltage utility line over the creek. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Elephant Head Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would install a temporary roadway crossing, requiring work in the waterbody, and a new high-voltage utility line over the creek. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid Elephant Head Creek.			
Elephant Head Creek Tributary 1	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to the creek during construction of a new high-voltage utility line over the creek. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 140 and 141	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to the watercourses during construction of a new high-voltage utility line over their channels. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourses.			
Constructed Watercourse 142	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to the watercourse during construction of a viaduct near the channel. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse. Operations would include intermittent work in or near the watercourse, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 143	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would install a new culvert in the watercourse for a proposed access road, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the waterbody, such as vegetation management and culvert maintenance.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Pacheco Creek Tributary 17	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to the creek during construction of a new high-voltage utility line over the creek. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.			
Marsh 7	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to the marsh because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the marsh.			
Pacheco Creek Tributary 43 and 44	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to these creeks from construction of a new high-voltage utility line over the creeks. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creeks.			

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Harper Canyon Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Harper Canyon Creek to construct a new viaduct crossing without piers inside the channel and new utility crossings. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Harper Canyon Creek Tributary 1	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Harper Canyon Creek Tributary 1 because it is located within a staging area near the western portal of Tunnel 2. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the creek.			
Harper Canyon Creek Tributary 2	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would result in minor disturbances to Harper Canyon Creek Tributary 2 due to nearby earthwork associated with minimizing the risk of landslides and construction of the tunnel portal. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the creek, such as vegetation management.			

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Harper Canyon Creek Tributary 3	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify the creek due to earthwork to construct the western portal of Tunnel 2 and install a culvert at the proposed portal, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the waterbody, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Harper Canyon Creek Tributary 4	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would construct a viaduct over the creek, relocate the creek to flow around a viaduct pier, and install a culvert at a proposed access road, all of which would require work in the creek. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Pacheco Creek Tributary 19	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	Although the creek is located within the project footprint, it would be avoided by construction activities. Operations would include intermittent work in or near the creek, such as vegetation management.			

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Pond 10 and 11	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	There would be no impact on Pond 10 and 11 during construction, because the pond would be avoided during construction. Operations would include intermittent work in or near the ponds, such as vegetation management.			
Pacheco Creek Tributary 20	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would permanently modify Pacheco Creek Tributary 20 for landslide minimization, requiring work in the creek. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Pacheco Creek Tributaries 21 – 30, 46 – 55, and 57	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would temporarily impact the hydrology of Pacheco Creek Tributaries 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, and 57 from tunnel construction. Groundwater inflows during tunnel construction may affect the hydrology of these tributaries through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would avoid the waterbodies.			

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South Fork Pacheco Creek	Central Coast	None designated in the Basin Plan	None listed.	Dissolved oxygen: shall not be reduced below 5.0 milligrams per liter, median values should not fall below 85% saturation. pH: 7.0 minimum, 8.5 maximum. Turbidity: 20% maximum for natural turbidity between 0 to 50 NTU; 10 NTU change maximum for natural turbidity between 50 to 100 NTU; 10% maximum change for natural turbidity greater than 100 NTU. Unionized ammonia: 0.025 milligrams per liter (as nitrogen) maximum.	The project would temporarily impact the hydrology of South Fork Pacheco Creek from tunnel construction. Groundwater inflows during tunnel construction may affect the hydrology of South Fork Pacheco Creek through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would avoid the waterbody.			
San Luis Reservoir Tributaries 1 – 9	Central Valley	None designated in the Basin Plan. Beneficial uses of San Luis Reservoir apply: MUN, AGR, IND, POW, REC-1, REC-2, WILD, WARM	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would temporarily impact the hydrology of San Luis Reservoir Tributaries 1, 2, 3, 4, 5, 6, 7, 8, and 9 from tunnel construction. Groundwater inflows during tunnel construction may affect the hydrology of these waterbodies through a lowering of the groundwater table, which also may indirectly affect the hydrology of San Luis Reservoir. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would avoid the waterbodies.			
Cottonwood Creek and Tributaries 1 – 16	Central Valley	Beneficial uses of San Luis Reservoir apply: MUN, AGR, IND, POW, REC-1, REC-2, WILD, WARM	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would temporarily impact the hydrology of Cottonwood Creek and tributaries 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16 from tunnel construction. Groundwater inflows during tunnel construction may affect the hydrology of Cottonwood Creek through a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would avoid the waterbody.			
Romero Creek Tributary 1	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would involve the construction of a new tunnel crossing at Romero Creek Tributary 1, which may temporarily impact the hydrology of the creek from a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. The project would also result in minor disturbances to the creek because it is within a temporary construction easement, which may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near the creek, such as vegetation management.			
Romero Creek	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct with a pier in the creek and a new utility crossing over Romero Creek. The project would also partially fill the creek and install a new culvert for an HSR access road, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. The project would also temporarily and indirectly impact the hydrology of Romero Creek from tunnel construction. This would occur because surface flows in Romero Creek Tributary 1 may be impacted from a lowering of the groundwater table. Project features require constructing and designing the tunnels to be as watertight as possible and controlling discharges of contaminated groundwater; however, these actions are not anticipated to avoid the impact from tunnel construction entirely. Operations would include intermittent work in or near the creek, such as vegetation management and bridge/culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Romero Creek Tributary 2	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new viaduct crossing over Romero Creek Tributary 2 and relocate the channel around a viaduct pier, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Romero Creek Tributary 3	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would permanently modify Romero Creek Tributary 3 due earthwork required to construct the embankment, requiring work in the waterbody. Additionally, the project would install a culvert in the creek for maintenance access. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Romero Creek Tributary 4 and 5	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct new culvert in Romero Creek Tributary 4 and 5 for an HSR access road, requiring work in the creeks. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these creeks would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the creeks. These modifications would also affect the path, speed, and volume of existing flows within the creeks. Operations would include intermittent work in or near these creeks, such as culvert maintenance.			
Romero Creek Tributary 6	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new viaduct crossing over Romero Creek Tributary 6. The project would also permanently modify the creek due earthwork required to construct the railbed embankment and install culverts for maintenance access, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the embankment would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Romero Creek Tributary 7	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Romero Creek Tributary 7 for an HSR access road, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as culvert maintenance.			
Romero Creek Tributary 8	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new wildlife crossing/culvert at the track embankment within Romero Creek Tributary 8, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Seasonal Wetland 20 and 21	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would temporarily disturb the wetlands from construction of an HSR access road. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in or near these wetlands, such as culvert maintenance.			
Romero Creek Tributary 10	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Romero Creek Tributary 10 for an HSR access road, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management.			
Romero Creek Tributary 11 and 12	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would temporarily disturb these creeks because they are located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these creeks.			
Romero Creek Tributary 13	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would permanently modify the creek due to earthwork required to construct the track embankment and install a new culvert for maintenance access, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management.			
Romero Creek Tributary 14	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would permanently modify Romero Creek Tributary 14 due to earthwork required to construct the track embankment, install a new culvert at the track embankment, and install a new culvert for maintenance access, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Romero Creek Tributary 15	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would permanently modify the creek due to earthwork required to construct the track embankment and install a new culvert for maintenance access, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management.			
Romero Creek Tributary 16	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a new culvert for maintenance access, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management.			

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Romero Creek Tributary 17 and 18	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct over the creeks and install culverts for maintenance access, requiring work in the creeks. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Romero Creek Tributary 19	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a new culvert for maintenance access, requiring work in the creek. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management.			
Romero Creek Tributary 20	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a new culvert at the track embankment, requiring work in the creek. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Romero Creek Tributary 21	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would permanently modify the creek due to earthwork required to construct the track embankment and install a new culvert at the embankment, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the creek, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Alkali Vernal Pool Complex 1	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill a portion of the vernal pool to construct an HSR access road and install a culvert at the access road, requiring work in the vernal pool. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the access road would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the vernal pool, such as bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Seasonal Wetland 11	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill a portion of the wetland to construct an HSR access road and install a culvert at the access road, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the access road would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the wetland, such as vegetation management and culvert maintenance.			
California Aqueduct	Central Valley	MUN, AGR, PROC, IND, POW, REC-1, REC-2, WILD	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would protect California Aqueduct in place during construction of a viaduct over the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the aqueduct, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Seasonal Wetland 12	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would partially fill Seasonal Wetland 12 for the track embankment, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Delta-Mendota Canal	Central Valley	MUN, AGR, REC-1, REC-2, WARM, WILD	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would protect Delta-Mendota Canal in place during construction of a viaduct over the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 32	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the channel around the embankment to cross below the viaduct, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 33	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 33 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the waterbody.			
Outside Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would protect Outside Canal in place during construction of a viaduct over the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 34	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate Constructed Watercourse 34 to cross below the proposed viaduct, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 35	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Constructed Watercourse 35, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Watercourse 36	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Constructed Watercourse 36, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges to and existing flows within the waterbody. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
San Joaquin Valley Subsection								
Constructed Watercourse 37	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct crossing over Constructed Watercourse 37and a new culvert within the watercourse, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 38	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct over the watercourse and relocate a portion of the watercourse, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 145	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a culvert in the watercourse for emergency access, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance.			
Constructed Basin 14	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a culvert in the basin for emergency access, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this basin would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the basin. These modifications would also affect the path, speed, and volume of existing flows within the basin. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the basin, such as vegetation management and culvert maintenance.			
Constructed Watercourse 39	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to flow around a proposed viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Watercourse 162	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a culvert in the watercourse for emergency access, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance.			
Constructed Watercourse 40	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill the watercourse within the proposed HSR right-of-way, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Main Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Main Canal to protect the canal in place during construction of a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Basin 9	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct over Constructed Basin 9 with piers in the basin, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the basin, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 41	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to flow around proposed viaduct piers, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 43	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 43 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the waterbody.			
Constructed Watercourse 44	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Constructed Watercourse 44, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Watercourse 160	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 160 because it is located within the proposed HSR right-of-way but no improvements are proposed. Operations would include intermittent work in or near the watercourse, such as vegetation management			
Constructed Watercourse 45	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Constructed Watercourse 45, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 146	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 146 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Constructed Watercourse 47	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would extend the existing culvert for the proposed access road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance.			
Constructed Watercourse 48	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert to cross below the embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Grading and fill for the grade separation and farm access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 165	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new viaduct over the watercourse and relocate the watercourse around a viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Grading and fill for the grade separation and farm access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Alkali Scrub Wetland 1	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would partially fill Alkali Scrub Wetland 1 to construct a proposed access road, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the access road would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the wetland.			

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Alkali Scrub Wetland 7	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to the wetland because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.			
Natural Watercourse 2	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert to cross below a proposed access road, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the waterbody, such as culvert maintenance.			
San Luis Wasteway	Central Valley	AGR (L), WILD (L), WARM, BIOL	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to San Luis Wasteway during construction of a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Seasonal Wetland 22	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would temporarily disturb the watercourse during construction of a viaduct over the wetland, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the waterbody, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Alkali Scrub Wetland 2	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new viaduct crossing over Alkali Scrub Wetland 2 and partially fill the wetland for maintenance access, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the wetland, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Alkali Scrub Wetland 3	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would partially fill Alkali Scrub Wetland 3 for maintenance access, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the maintenance access road would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Seasonal Wetland 23	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct with a column in the wetland and partially fill the wetland, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the wetland, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Alkali Scrub Wetland 4	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Alkali Scrub Wetland 4 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the wetland.			
Alkali Scrub Wetland 8	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would partially fill Alkali Scrub Wetland 8 for maintenance access, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the maintenance access road would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Alkali Scrub Wetland 9	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would completely fill this small wetland in order to construct a viaduct pier, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. This would also cause a depletion of water resources within the project extent. Operations would not affect the wetland.			
Constructed Watercourse 51	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 51 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Constructed Watercourse 52	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert within Constructed Watercourse 52 and relocate a portion of the channel along the embankment for the Henry Miller Road grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the embankment would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Constructed Watercourse 53	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 53 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Constructed Watercourse 54	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to the watercourse, because it is located in a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			

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Constructed Watercourse 55	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert where the watercourse crosses the track embankment, a new culvert where the watercourse would cross relocated Henry Miller Road, and relocate a portion of the watercourse, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and relocated Henry Miller Road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 56	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct two new culverts in Constructed Watercourse 56, one for the track embankment and one for the driveway to the proposed traction power facility, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 57	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Constructed Watercourse 57, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 58	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to the watercourse because it is located in a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Constructed Watercourse 59	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would completely fill Constructed Watercourse 59 for the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. This would also cause a depletion of water resources within the project extent. Operations would not affect the watercourse.			
Constructed Watercourse 60	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would no impact on Construct Watercourse 60 because it would be protected during construction and operations would avoid the watercourse.			
Constructed Watercourse 61	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Constructed Watercourse 61, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Watercourse 62, 63, 64, and 65	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate these constructed watercourses to the toe of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these waterbodies would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new embankment would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 66	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate a portion of the watercourse and provide a culvert where it crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 67	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate Constructed Watercourse 67 along the toe of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 68	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse around a proposed viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 147	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate Constructed Watercourse 147 along the toe of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 148	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would completely fill this watercourse to build the track embankment and for maintenance access, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. This would also cause a depletion of water resources within the project extent. Operations would not affect the watercourse.			
Constructed Watercourse 149 and 163	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to these constructed watercourses because they are located within a staging area. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these waterbodies.			

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Los Banos Creek	Central Valley	AGR (L), WILD (L), WARM, BIOL	Indicator bacteria, total dissolved solids, low dissolved oxygen, toxicity	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Los Banos Creek to construct a new viaduct without piers inside the channel and protect the creek in place. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains. Reduced shading over Los Banos Creek from vegetation management and discharges of iron from brake dust, PAHs, may exacerbate the low dissolved oxygen impairment through increased water temperatures and increased microorganism growth. Discharges of bacterial pathogens from sanitary waste during construction may exacerbate the indicator bacteria impairment. Accidental discharges of any pollutant may exacerbate the toxicity impairment. Construction site BMPs would avoid or minimize the potential for discharging sanitary waste and accidental leaks and spills during the construction phase.			
Los Banos Creek Tributary 1	Central Valley	AGR (L), WILD (L), WARM, BIOL	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would temporarily disturb the creek because of construction of viaduct footings, requiring work in the waterbody. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the creek, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 69	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to flow around a viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 70	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to flow around a viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 71	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct over the watercourse and relocate the watercourse to cross below a proposed access road with a new culvert, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 72	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert to cross below the track embankment and a proposed access road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Basin 15	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would completely fill this basin to build the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. This would also cause a depletion of water resources within the project extent. Operations would not affect the basin.			
Seasonal Wetland 13	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would partially fill Seasonal Wetland 13 to construct a proposed access road, requiring work in the wetland. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the access road would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the wetland.			
Constructed Watercourse 73	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert where the watercourse crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 76	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert where the watercourse crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 77	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct two new culverts, one where the watercourse crosses the track embankment and one where the watercourse crosses a proposed access road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and access road would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in or near the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 78	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to the south side of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			

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Constructed Watercourse 79 and 80	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourses to the south side of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these waterbodies would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 81	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 81 because it is located within a utility temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Constructed Watercourse 82	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a temporary culvert for a temporary detour at the Mercy Springs grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the grade separation road would change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Santa Fe Canal	Central Valley	AGR (L), WILD (L), WARM, BIOL	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new reinforced concrete box culvert where the canal crosses the rail embankment and install a temporary culvert for a temporary detour at the Mercy Springs grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Vernal Pool 4	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill a majority of Vernal Pool 4 for the track embankment and a proposed access road, requiring work in the vernal pool. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the area and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and access road would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 84	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 84 because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
San Luis Drain	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new reinforced concrete box culvert where the drain crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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San Luis Canal	Central Valley	AGR (L), WILD (L), WARM, BIOL	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new reinforced concrete box culvert where the canal crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Porter-Blake Bypass	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate a portion of the canal and construct a new culvert where the canal crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 85 and 86	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourses south of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges to and existing flows within the waterbody. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Mud Slough Alkali Marshes	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct with piers in the marshes, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the marshes, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Mud Slough, Mud Slough Alkali Marshes, and Alkali Scrub Wetland 10, 11, 12, and 13	Central Valley	AGR (L), REC-1, REC-2, WILD, WARM, SPWN, COMM, SHELL	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a viaduct that crosses over Mud Slough and adjacent wetlands with piers in the waterbodies, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the waterbodies, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 87	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate Constructed Watercourse 87 around a proposed viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 88	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate Constructed Watercourse 88 around a proposed viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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San Pedro Canal	Central Valley	AGR (L), WILD (L), WARM, BIOL	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to San Pedro Canal during construction of a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around San Pedro Canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 89	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate Constructed Watercourse 89 around a proposed viaduct pier, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 90	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to the watercourse because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Constructed Watercourse 164	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to the watercourse because it is located within a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Boundary Drain	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Boundary Drain during construction of a viaduct without piers inside the channel. This work may potentially result in erosion or discharge of polluted runoff. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around Boundary Drain, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Lone Tree Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new 4-foot by 3-foot reinforced concrete box culvert to cross the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Devon Drain	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new 6-foot by 4-foot reinforced concrete box culvert to cross the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Watercourse 92	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert in Constructed Watercourse 92 and fill a portion of the watercourse for the proposed Delta Road grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the proposed grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Constructed Watercourse 93	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the channel to the west of the Delta Road grade separation and provide a culvert to cross the Delta Road to Henry Miller Road connector, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the proposed grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Midway Swamp Ditch	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a temporary culvert in Midway Swamp Ditch for a temporary roadway required to construct the Delta Road grade separation. Additionally, the project would install a new 48-inch reinforced concrete pipe culvert where the ditch crosses the track embankment and relocate a portion of the ditch south of Henry Miller Road along the toe of the Delta Road embankment. Temporary stream diversion and dewatering is required. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the ditch, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 94, 95, 96, and 97	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to these watercourses because they are located in a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid these watercourses.			
Constructed Watercourse 98	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a culvert within Constructed Watercourse 98 to cross a proposed access road and relocate the channel to flow into relocated Midway Swamp Ditch, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the proposed access road would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Constructed Watercourse 150	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a culvert in Constructed Watercourse 150 to cross the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and bridge maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 99	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to the watercourse because it is located in a temporary construct easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in and around the watercourse, such as vegetation management and bridge maintenance.			

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Constructed Watercourse 100	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a new culvert where Constructed Watercourse 100 crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
West Delta Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate a portion of the canal on the south side of Henry Miller Road and extend the existing culvert where the canal crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
West Delta Drain	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate a portion of the canal on the south side of Henry Miller Road and install a new 7-foot by 3-foot reinforced concrete box culvert where the canal crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 151	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill the watercourse within the proposed HSR right-of-way, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 152	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a culvert where the watercourse crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 101	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to maintain connectivity with relocated West Delta Drain, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would avoid the watercourse.			
Dambrosa Branch No. 1	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new reinforced concrete box culvert for Dambrosa Branch No. 1 where it crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

Waterbody	RWQCB	Existing Beneficial Uses	CWA Section 303(d) List Impairments	Water Quality Objectives (tables referenced are in the RWQCBs' Basin Plans)	Alternative 1 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 2 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 3 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives	Alternative 4 Impacts to Beneficial Uses, Listed Impairments, and Water Quality Objectives
Constructed Watercourse 102	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 102 because it is located in a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			
Constructed Watercourse 103	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate a portion of the watercourse to flow along the south side of the MOWS and construct a new culvert for the watercourse to cross the MOWS and track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and MOWS would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 104	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to maintain connectivity with relocated Constructed Watercourse 103, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Delta Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a temporary culvert for the construction of the Turner Island Road grade separation and construct a new culvert where Delta Canal crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the proposed grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 105	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert where Constructed Watercourse 105 crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
East Delta Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new reinforced concrete box culvert where East Delta Canal crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Watercourse 107	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert where Constructed Watercourse 107 crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 108	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill the watercourse for the track embankment and relocate the watercourse to connect with Constructed Watercourse 109 on the south side of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 109	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to the south of the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 110, 111, 112, and 113	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert these watercourses cross the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to these watercourses would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbodies. These modifications would also affect the path, speed, and volume of existing flows within these watercourses. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around these watercourses, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 114	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to the west of the Turner Island Road grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Belmont Drain	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	During construction of the Turner Island Road grade separation, a temporary culvert in Belmont Drain would be provided for a temporary roadway detour. The project would construct a new culvert where Belmont Drain crosses the track embankment and two new culverts where Belmont Drain crosses the Turner Island Road grade separation. Temporary stream diversion and dewatering is required. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
County Road Ditch	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	During construction of the Turner Island Road grade separation, a temporary culvert in County Road Ditch would be provided for a temporary roadway detour. The project would relocate the channel west of the Turner Island Road grade separation. Temporary stream diversion and dewatering is required. Temporary stream diversion and dewatering is required. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the grade separation would also change the path, speed, and volume of existing. Operations would avoid County Road Ditch.			

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Willis Branch	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	During construction of the Turner Island Road grade separation, a temporary culvert would be provided for a temporary roadway detour. The project would also relocate the Willis Branch to the west of the Turner Island Road grade separation and install new culverts to cross the track embankment. Temporary stream diversion and dewatering is required. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 153	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate or fill the watercourse for the Turner Island Road grade separation, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Poso Drain	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the canal to the east side of the Turner Island Road grade separation and install a new culvert to pass below track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the drain, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 115	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to the east side of the Turner Island Road grade separation and construct a new culvert for a proposed farm access road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new access road and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Constructed Watercourse 116	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the watercourse to the north of the proposed HSR right-of-way, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new access road and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 117	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 117. This work may potentially result in erosion or discharge of polluted runoff. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			

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Constructed Watercourse 118	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert where the watercourse crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Delta No. 1 Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new culvert where the canal crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 154	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill the watercourse within the proposed HSR right-of-way, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 155	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would install a new culvert in the watercourse at the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the watercourse, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
Constructed Watercourse 119	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill the watercourse within the proposed HSR right-of-way, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing and grade separation would also change the path, speed, and volume of existing discharges and flows. Operations would result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
San Juan Drain	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would construct a new reinforced concrete box culvert in San Juan Drain where it crosses the track embankment and a new culvert where it crosses the intersection of Carlucci Road and relocated Hutchins Road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would include intermittent work in and around the canal, such as vegetation management and culvert maintenance, as well as result in continuous discharges of brake dust, PAHs, and other contaminants from trains.			
West San Juan No. 1 Canal	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would protect the existing culvert and construct a new culvert where it crosses the track embankment, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the new crossing would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the canal.			

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Constructed Watercourse 120	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would fill a portion of the watercourse for a retaining wall along the northern edge of the Carlucci Road embankment on the south side of Henry Miller Road, requiring temporary stream diversion and dewatering. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the retaining wall would also change the path, speed, and volume of existing discharges and flows. Operations would avoid the watercourse.			
Constructed Watercourse 121	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would relocate the channel around the proposed relocation of Hutchins Road to outfall into San Juan Drain. The project would also construct a new culvert at the watercourse to maintain connectivity with Constructed Watercourse 120 below Hutchins Road. Temporary stream diversion and dewatering is required. This work may potentially result in erosion or discharge of polluted runoff. Modifications to this waterbody would change the channel length and slopes, affecting the path, speed, and volume of existing discharges into the waterbody. These modifications would also affect the path, speed, and volume of existing flows within the waterbody. Grading and fill for the relocated Hutchins Road would also change the path, speed, and volume of existing discharges to and existing flows within the waterbody. Operations would avoid Constructed Watercourse 121.			
Constructed Watercourse 123	Central Valley	None designated in the Basin Plan	None listed.	Dissolved oxygen: 5.0 milligrams per liter minimum. pH: 6.5 minimum, 8.5 maximum. Temperature: 5 degrees Fahrenheit change maximum. Turbidity: maximum change based on natural levels.	The project would result in minor disturbances to Constructed Watercourse 123, because it is located in a temporary construction easement. This work may potentially result in erosion or discharge of polluted runoff. Operations would avoid the watercourse.			

CDFW = California Department of Fish and Wildlife
CWA = Clean Water Act
BMP = best management practices
PPDG = Caltrans' Project Planning and Design Guide
NTU = Nephelometric Turbidity Units
RWQCB = Regional Water Quality Control Board
SWRCB = California State Water Resources Control Board
Authority = California High-Speed Rail Authority
MOWF = Maintenance of Way Facility
PAH = polycyclic aromatic hydrocarbons
AGR = agricultural supply; BIOL = preservation of biological habitats of special significance; COLD = cold freshwater habitat; COMM = commercial and sport fishing; FRSH = freshwater replenishment; GWR = groundwater recharge; IND = industrial service supply; (L) = limited beneficial use; MIGR = fish migration; MUN = municipal and domestic supply; POW = hydropower generation; PROC = industrial process supply; RARE = preservation of rare, threatened, or endangered species; REC-1 = water contact recreation; REC-2 = noncontact water recreation; SPWN = fish spawning, reproduction or early development; WARM = warm freshwater habitat; WILD = wildlife habitat
Waterbodies are listed from north to south along the project alignment.
Narrative water quality objectives in the jurisdictional RWQCB Basin Plans also apply to each waterbody unless otherwise specified in the Basin Plan; refer to EIR/EIS Volume 1, Section 3.8, Hydrology and Water Resources, for a list of narrative water quality objectives.
1 = Fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than 10% of the total number of samples taken during any 30-day period exceed 400/100 ml.
2 = Fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 2000/100 ml, nor shall more than 10% of samples collected during any 30-day period exceed 4000/100 ml.
3 = Hard water is defined as water exceeding 100 milligrams per liter calcium carbonate (CaCO3).

References

California Regional Water Quality Control Board, Central Coast Region. 2019. Water Quality Control Plan for the Central Coastal Basin.

California Regional Water Quality Control Board, Central Valley Region. 2018. The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region Fourth Edition the Sacramento River Basin and the San Joaquin River Basin.

California Regional Water Quality Control Board, San Francisco Bay Region. 2017. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).