

San Luis Low Point Improvement Project Environmental Impact Statement / Environmental Impact Report

Appendix C: Regulatory Settings

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Appendix C

Regulatory Settings

The Regulatory Settings Appendix supplements the San Luis Low Point Improvement Project (SLLPIP) Environmental Impact Statement/Environmental Impact Report (EIS/EIR). Federal and State of California (State) laws, rules and regulations, Executive Orders (EOs), and compliance requirements for implementation of the alternatives are described in the following sections. Descriptions are organized by Federal, State, and local requirements.

C.1 Federal Requirements

C.1.1 Advisory Council on Historic Preservation

Advisory Council on Historic Preservation (ACHP) regulations governing the Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800) establish procedures for compliance with Section 106 of the National Historic Preservation Act (NHPA). These regulations define the Criteria of Adverse Effect; outline the role of the State Historic Preservation Officer (SHPO) in the Section 106 review process; set forth documentation requirements; and describe procedures to be followed if significant historic properties are discovered during implementation of an undertaking. Effects on prehistoric and historic period cultural resources, as well as traditional cultural properties of importance to Native American communities, that are deemed significant (i.e., eligible for listing in the National Register of Historic Places (NRHP) under 36 CFR Part 60.4) must be considered in project planning and construction. The responsible Federal agency must consult with the SHPO and other parties regarding any proposed undertaking that may affect NRHP-eligible properties. The NHPA Section 106 process also requires that, in the event that an undertaking will result in an adverse effect to historic properties, measures to avoid, minimize, or mitigate the adverse effect must be resolved through negotiated formal agreement in consultation with the SHPO and other consulting parties.

C.1.2 Bald and Golden Eagle Protection Act

Administered by the United States Fish and Wildlife Service (USFWS), the Bald and Golden Eagle Protection Act (BGEPA) provides for the protection of the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified conditions, the taking,

possession and commerce of such birds. The BGEPA prohibits unregulated take and makes it illegal to kill, wound, pursue, shoot, shoot at, poison, capture, trap, collect, molest, or disturb bald or golden eagles. Surveys are required to determine whether nests will be disturbed and, if so, a buffer area with a specified radius around the nest must be established so that no disturbance or intrusion is allowed until the young have fledged and left the nest. Coordination with the USFWS is recommended for establishing an appropriate buffer.

C.1.3 Central Valley Project Improvement Act

On October 30, 1992, Public Law 102-575 was signed into law. This law included Title 34, the Central Valley Project Improvement Act (CVPIA), which amended previous authorizations of the Central Valley Project (CVP). The CVPIA mandated changes in management of the CVP, requiring fish and wildlife protection, restoration, and mitigation as project purposes equal to that of agricultural irrigation, municipal and industrial (M&I) supplies, and power generation. The CVPIA also authorized the Accelerated Water Transfer Program, which allows voluntary water transfers under an accelerated process between CVP contractors through multi-year, programmatic environmental documentation.

C.1.4 Civil Rights Act of 1964 and Executive Order 12898

The concept of environmental justice is rooted in the Civil Rights Act of 1964 which prohibits discrimination in Federally-assisted programs, and EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued February 11, 1994. EO 12898 requires all Federal agencies to conduct “programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.” Section 1-101 of the Order requires Federal agencies to identify and address “disproportionately high and adverse human health or environmental effects” of programs on minority and low-income populations (EO 12898 1994).

The Council on Environmental Quality (CEQ) (1997) states that environmental justice concerns may arise from effects on the natural or physical environment, such as human health or ecological effects on minority or low-income populations, or from related social or economic effects.

In 1998, the United States Environmental Protection Agency (USEPA) issued final guidance on incorporating environmental justice concerns into National Environmental Policy Act (NEPA) analysis (USEPA 1998a). The guidance states that an affected area is considered to have a minority or low-income

population if the total minority or low-income population is more than 50 percent of the total population in the affected area or “meaningfully greater” than the percentage in the surrounding area (e.g., census tract compared to county, county compared to State). A minority is defined as a member of the following population groups: American Indian/Alaskan Native, Asian or Pacific Islander, Black (non-Hispanic), or Hispanic (CEQ 1997).

C.1.5 Clean Air Act

The USEPA is responsible for implementation of the Federal Clean Air Act (CAA). The CAA was enacted in 1955 and was amended in 1963, 1965, 1967, 1970, 1977, 1990, and 1997. Under authority of the CAA, USEPA established National Ambient Air Quality Standards (NAAQS) for the following criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), inhalable particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (PM_{2.5}), and sulfur dioxide (SO₂).

Table C-1 presents the current NAAQS for the criteria pollutants. O₃ is a secondary pollutant, meaning that it is formed in the atmosphere from reactions of precursor compounds under certain conditions. Primary precursor compounds that lead to formation of O₃ include volatile organic compounds (VOCs) and nitrogen oxides (NO_x). Fine particulate matter with an aerodynamic diameter less than or equal to 2.5 microns can be emitted directly from sources (e.g., engines) or can form in the atmosphere from precursor compounds. Its precursor compounds in the area of analysis include sulfur oxides (SO_x), NO_x, VOCs, and ammonia.

The Federal CAA requires States to classify air basins (or portions thereof) as either “attainment” or “nonattainment” with respect to criteria air pollutants, based on whether the NAAQS have been achieved, and to prepare State Implementation Plans (SIPs) containing emission reduction strategies to maintain the NAAQS for those areas designated as attainment and to attain the NAAQS for those areas designated as nonattainment. Figure C-1 identifies the air basins that would be affected by the alternatives.

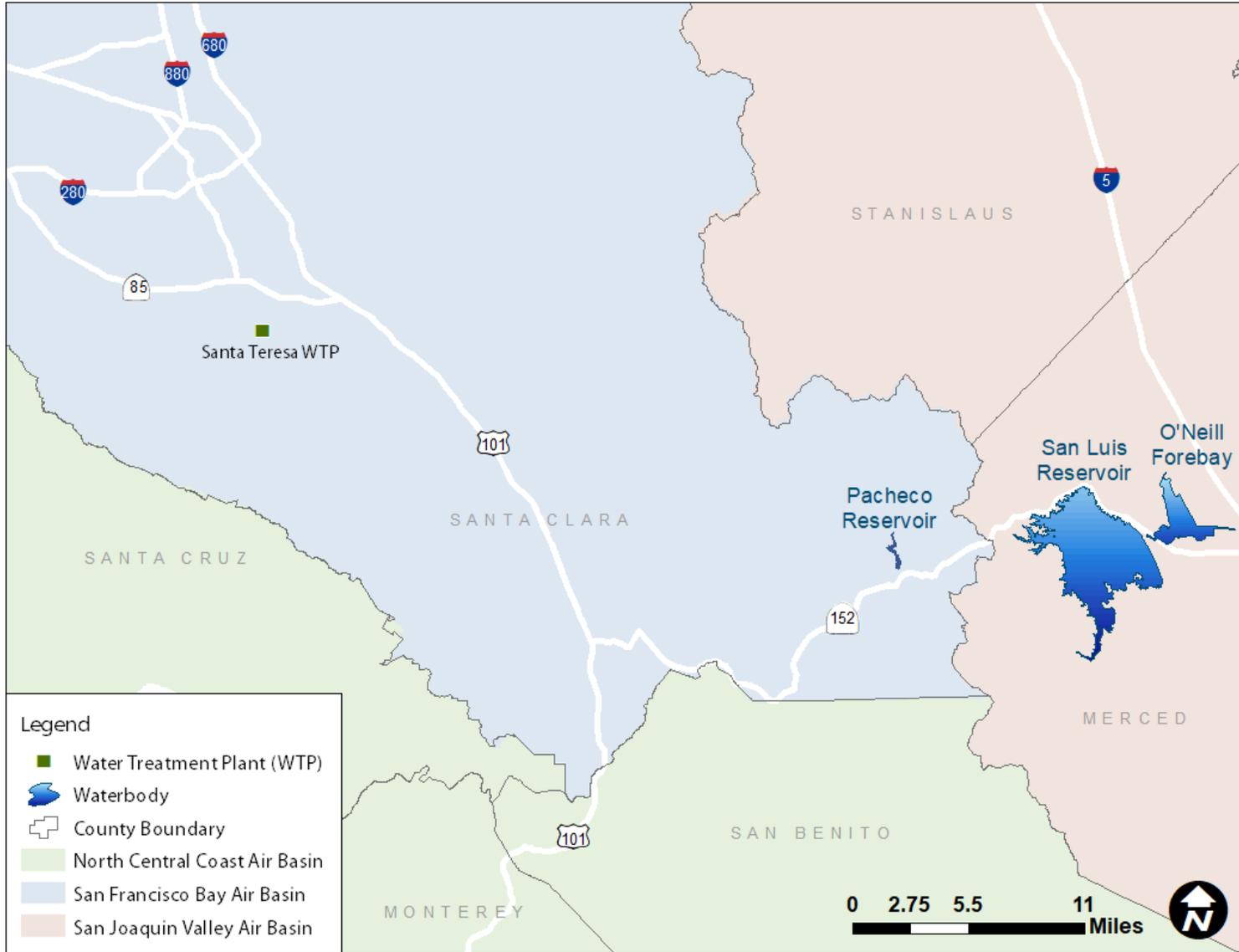
Table C-1. National Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS Primary	NAAQS Secondary	Violation Criteria
O ₃	8 Hour	0.070 ppm (137 µg/m ³)	Same as Primary Standard	Annual fourth-highest daily maximum 8-hour concentration, averaged over three years
PM ₁₀	24 Hour	150 µg/m ³	Same as Primary Standard	Not to be exceeded more than once per year on average over three years
PM _{2.5}	24 Hour	35 µg/m ³	Same as Primary Standard	98 th percentile, averaged over three years
PM _{2.5}	Annual	12.0 µg/m ³	15 µg/m ³	Annual mean, averaged over three years
CO	1 Hour	35 ppm (40 mg/m ³)	N/A	Not to be exceeded more than once per year
CO	8 Hour	9 ppm (10 mg/m ³)	N/A	Not to be exceeded more than once per year
NO ₂	1 Hour	100 ppb (188 µg/m ³)	N/A	98 th percentile, averaged over three years
NO ₂	Annual	53 ppb (100 µg/m ³)	Same as Primary Standard	Annual mean
SO ₂	1 Hour	75 ppb (196 µg/m ³)	N/A	99 th percentile of 1-hour daily maximum concentrations, averaged over three years
SO ₂	3 Hour	N/A	0.5 ppm (1,300 µg/m ³)	Not to be exceeded more than once per year
Pb	Rolling 3-Month Average	0.15 µg/m	Same as Primary Standard	Not to be exceeded

Source: California Air Resources Board (CARB) 2016.

Key:

µg/m³ = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standard; CO = carbon monoxide; mg/m³ = milligrams per cubic meter; N/A = not applicable; NAAQS = National Ambient Air Quality Standard; NO₂ = nitrogen dioxide; O₃ = ozone; Pb = lead; PM₁₀ = inhalable particulate matter; PM_{2.5} = fine particulate matter; ppb = parts per billion; ppm = parts per million; SO₂ = sulfur dioxide



Source: CARB 2010.

Figure C-1. California Air Basins

C.1.5.1 General Conformity

Section 176 (c) of the CAA (42 United States Code [USC] 7506[c]) requires any entity of the Federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable SIP required under Section 110 (a) of the Federal CAA (42 USC 7410[a]) before the action is otherwise approved. In this context, conformity means that such Federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards. Each Federal agency must determine that any action proposed that is subject to the regulations implementing the conformity requirements will, in fact, conform to the applicable SIP before the action is taken. This project is subject to the General Conformity Rule because it involves a Federal agency (United States Department of the Interior, Bureau of Reclamation [Reclamation]).

On April 5, 2010, the USEPA revised the general conformity regulations at 40 CFR 93 Subpart B for all Federal activities except those covered under transportation conformity (75 Federal Register [FR] 17254). The revisions were intended to clarify, streamline, and improve conformity determination and review processes, and to provide transition tools for making conformity determinations for new NAAQS. The revisions also allowed Federal facilities to negotiate a facility-wide emission budget with the applicable air pollution control agencies, and to allow the emissions of one precursor pollutant to be offset by the emissions of another precursor pollutant. The revised rules became effective on July 6, 2010.

The general conformity regulations apply to a proposed Federal action in a nonattainment or maintenance area if the total of direct¹ and indirect² emissions of the relevant criteria pollutants and precursor pollutants caused by the proposed action equal or exceed certain de minimis amounts, thus requiring the Federal agency to make a determination of general conformity. A Federal agency can indirectly control emissions by placing conditions on Federal approval or Federal funding.

Table C-2 presents the de minimis amounts for nonattainment areas. The de minimis threshold for all maintenance areas is 100 tons per year (tpy), except for Pb, which has a de minimis threshold of 25 tpy.

¹ Direct emissions are those that are caused or initiated by the Federal action, and occur at the same time and place as the Federal action.

² Indirect emissions are reasonably foreseeable emissions that are further removed from the Federal action in time and/or distance, and can be practicably controlled by the Federal agency on a continuing basis (40 CFR 93.152).

Table C-2. General Conformity De Minimis Thresholds

Pollutant	Classification of Emissions Type	De Minimis Threshold (tpy)
O ₃ (VOCs or NOx)	Serious NAA	50
O ₃ (VOCs or NOx)	Severe NAA	25
O ₃ (VOCs or NOx)	Extreme NAA	10
O ₃ (VOCs or NOx)	Other NAA	100
CO	n/a	100
SO ₂	n/a	100
NO ₂	n/a	100
PM ₁₀	Moderate NAA	100
PM ₁₀	Serious NAA	70
PM _{2.5}	Direct emissions	100
PM _{2.5}	SO ₂ precursor	100
PM _{2.5}	NOx precursor	100
PM _{2.5}	VOC or ammonia precursor ¹	100
Pb	n/a	25

Source: 40 CFR 93.153.

Notes:

¹ Pollutant not subject to de minimis threshold if the State does not determine it to be a significant precursor to PM_{2.5} emissions.

Key:

CO = carbon monoxide; n/a = not applicable; NAA = nonattainment area; NO₂ = nitrogen dioxide; NOx = nitrogen oxides; O₃ = ozone; Pb = lead; PM₁₀ = inhalable particulate matter; PM_{2.5} = fine particulate matter; SO₂ = sulfur dioxide; tpy = tons per year; VOC = volatile organic compounds

The general conformity regulations incorporate a stepwise process, beginning with an applicability analysis. According to USEPA guidance (USEPA 1994), before any approval is given for a proposed action to go forward, the regulating Federal agency must apply the applicability requirements found at 40 CFR 93.153(b) to the proposed action. The guidance states that the applicability analysis can be (but is not required to be) completed concurrently with any analysis required under NEPA. If the regulating Federal agency determines that the general conformity regulations do not apply to the proposed action (meaning the project emissions do not exceed the de minimis thresholds), no further analysis or documentation is required.

If the general conformity regulations apply to the proposed action, the regulating Federal agency must next conduct a conformity evaluation in accord with the criteria and procedures in the implementing regulations, publish a draft determination of general conformity for public review, and then publish the final determination of general conformity. For a required action to meet the conformity determination emissions criteria, the total of direct and indirect emissions from the action must be in compliance or consistent with all relevant requirements and milestones contained in the applicable SIP (40 CFR 93.158[c]), and in addition must meet other specified requirements, such as:

- For any criteria pollutant or precursor, the total of direct and indirect emissions from the action is specifically identified and accounted for in

the applicable SIP's attainment or maintenance demonstration (40 CFR 93.158[a][1]); or

- For precursors of O₃, NO₂, or particulate matter, the total of direct and indirect emissions from the action is fully offset within the same nonattainment (or maintenance) area through a revision to the applicable SIP or a similarly enforceable measure that effects emission reductions so that there is no net increase in emissions of that pollutant (40 CFR 93.158[a][2]); or
- For O₃ or NO₂, the total of direct and indirect emissions from the action is determined and documented by the State agency primarily responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would not exceed the emissions inventory specified in the applicable SIP (40 CFR 93.158[a][5][i][A]); or
- For O₃ or NO₂, the total of direct and indirect emissions from the action (or portion thereof) is determined by the State agency responsible for the applicable SIP to result in a level of emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed the emissions inventory specified in the applicable SIP and the State Governor or the Governor's designee for SIP actions makes a written commitment to USEPA for specific SIP revision measures reducing emissions to not exceed the emissions inventory (40 CFR 93.158[a][5][i][B]).

C.1.6 Clean Water Act

Growing public awareness and concern for controlling water pollution led to enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA). The CWA established the basic structure for regulating discharges of pollutants into the waters of the U.S. It gave the USEPA the authority to implement pollution control programs such as setting wastewater standards for industrial and municipal dischargers. The CWA also continued requirements to set water quality standards for all known contaminants in surface waters. The CWA made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions (USEPA 2002a).

Section 303(d) of the 1972 CWA requires States, territories and authorized tribes to develop a list of water quality-impaired segments of waterways. The 303(d) list includes water bodies that do not meet water quality standards for the specified beneficial uses of that waterway, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water

bodies on their 303(d) lists and implement a process, called Total Maximum Daily Loads (TMDLs), to meet water quality standards (USEPA 2002b).

The TMDL process is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the maximum allowable loadings of a pollutant that can be assimilated by a water body while still meeting applicable water quality standards. The TMDL provides the basis for the establishment of water quality-based controls. These controls should provide the pollution reduction necessary for a water body to meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The TMDLs allocation calculation for each water body must include a margin of safety to ensure that the water body can be used for the uses the State has designated. Additionally, the calculation also must account for seasonal variation in water quality (USEPA 2002b).

TMDLs are intended to address all significant stressors that cause or threaten to cause water body beneficial use impairments, including point sources (e.g., wastewater treatment plant discharges), nonpoint sources (e.g., runoff from fields, streets, range, or forest land), and naturally occurring sources (e.g., runoff from undisturbed lands). TMDLs may be based on readily available information and studies. In some cases, complex studies or models are needed to understand how stressors are causing water body impairment. In many cases, simple analytical efforts provide an adequate basis for stressor assessment and implementation planning. TMDLs are developed to provide an analytical basis for planning and implementing pollution controls, land management practices, and restoration projects needed to protect water quality. States are required to include approved TMDLs and associated implementation measures in State water quality management plans. Within California, TMDLs implementation is through regional Basin Plans.

The CWA also establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and gives the USEPA the authority to implement pollution control programs such as setting wastewater standards for industries (USEPA 2002c). In certain States such as California, the USEPA has delegated authority to State agencies.

Water quality of waters of the U.S. subjected to a discharge of dredged or fill material is regulated under Section 404 of the CWA. These actions must not violate Federal or State water quality standards. Specifically in the State of California, the applicable Regional Water Quality Control Board (RWQCB) administers Section 401 and either issues or denies water quality certifications depending upon whether the proposed discharge or fill material complies with applicable State and Federal laws.

In addition to complying with State and Federal water quality standards, all point sources that discharge into waters of the U.S. must obtain a National

Pollutant Discharge Elimination System (NPDES) permit under provisions of Section 402 of the CWA. In California, the State Water Resources Control Board (SWRCB) and RWQCBs are responsible for the implementation of the NPDES permitting process at the State and regional levels, respectively.

The NPDES permit process also provides a regulatory mechanism for the control of non-point source pollution created by runoff from construction and industrial activities, and general and urban land use, including runoff from streets. Projects involving construction activities (e.g., clearing, grading, or excavation) involving land disturbance greater than one acre must file a Notice of Intent (NOI) with the applicable RWQCB to indicate their intent to comply with the State General Permit for Stormwater Discharges Associated with Construction Activity (General Permit). The State General Permit specifies Best Management Practices (BMPs), to achieve compliance as well as numeric action levels (NALs) in order to achieve Federal standards to minimize sediment and pollutant loadings. The General Permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) as well as a Rain Event Action Plan (REAP) prior to construction. The SWPPP and REAP are intended to help identify the sources of sediment and other pollutants, and assess the effectiveness of BMPs in preventing or reducing pollutants in storm water discharges and authorized non-storm water discharges. The CWA also requires that a permit be obtained from the USEPA and the United States Army Corps of Engineers (USACE) when discharge of dredged or fill material into wetlands and waters of the U.S. occurs. Section 404 of the CWA requires the USEPA and USACE to issue individual and general permits for these activities.

C.1.7 Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), also known as Superfund, created a tax on the chemical and petroleum industries to provide for response and cleanup of hazardous substances that may endanger public health or the environment. The Act established requirements for abandoned hazardous waste sites and provided for liability of persons responsible for releases of hazardous waste at these sites (USEPA 2015a).

C.1.8 Dam Safety Guidelines

The Federal government issued *Federal Guidelines for Dam Safety* in 1979 (reprinted April 2004) (Federal Emergency Management Agency [FEMA] 2004). The purpose of these guidelines is to enhance national dam safety and ensure protection of human life and property. Federal agencies are required to apply these guidelines in planning, design, construction, operation, and regulation to protect the structural integrity of dams and associated structures. Additional guidelines were developed in subsequent documents including dam

safety risk management, emergency action planning, earthquake analysis and design of dams, hazard potential classification for dams, and selecting appropriate inflow design floods for dams.

C.1.9 Earthquake Hazard Reduction Act of 1977

The Earthquake Hazard Reduction Act of 1977 established a national goal of reducing the risks of life and property from future earthquakes in the United States through the establishment and maintenance of an earthquake program including prediction and hazard assessment research, seismic monitoring and information dissemination. The Act established the Earthquake Hazard Reduction Program to promote the adoption of earthquake hazard reduction measures by Federal, State, and local governments. Section 8 of the Act calls for the adoption of standards for assessing and enhancing the seismic safety of buildings constructed for or leased by the Federal Government (42 United States Code [USC] 7701 et. seq.).

C.1.10 Endangered Species Act

Under Endangered Species Act (ESA), the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as threatened or endangered (USC, Title 16, Section 1533[c]). ESA prohibits the “take” of endangered or threatened fish and wildlife species, the take of endangered or threatened plants in areas under federal jurisdiction or in violation of state law, or adverse modifications to their critical habitat. Under ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS and National Marine Fisheries Service (NMFS) also interpret the definition of “harm” to include significant habitat modification that could result in the take of a species.

If an activity would result in the take of a federally-listed species, one of the following is required: an incidental take permit (ITP) under Section 10(a) of ESA or an incidental take statement issued pursuant to federal interagency consultation under Section 7 of ESA. Such authorization typically requires various measures to avoid and minimize species take, and to protect the species and avoid jeopardy to the species’ continued existence.

Pursuant to the requirements of Section 7 of ESA, a federal agency reviewing a proposed project which it may authorize, fund, or carry out must determine whether any federally-listed threatened or endangered species, or species proposed for federal listing, may be present in the project area and determine whether implementation of the proposed project is likely to affect the species. In addition, the federal agency is required to determine whether a proposed project is likely to jeopardize the continued existence of a listed species or any species proposed to be listed under ESA or result in the destruction or adverse modification of critical habitat proposed or designated for such species (16 USC 1536[3], [4]).

NMFS administers ESA for marine and anadromous fish species, including California Central Valley steelhead (*Oncorhynchus mykiss*) distinct population segment (DPS), Sacramento River winter-run and Central Valley spring-run Chinook salmon (*O. tshawytscha*) evolutionarily significant unit (ESU), and southern DPS of North American green sturgeon (*Acipenser medirostris*). USFWS administers ESA for non-anadromous and non-marine fish species such as delta smelt (*Hypomesus transpacificus*), and longfin smelt (*Spirinchus thaleichthys*), which has been recently proposed for listing and warrants consideration for protection under the ESA. In 2012, the USFWS acknowledged that the San Francisco Bay-Delta DPS of the longfin smelt warrants listing but was precluded from listing at that time because of other higher priorities and consequently will be treated as a candidate species. Projects for which a federally-listed species is present and likely to be affected by an existing or proposed project must receive authorization from USFWS and/or NMFS. Authorization may involve a letter of concurrence that the project will not result in the potential take of a listed species, or may result in the issuance of a Biological Opinion (BO) that describes measures that must be undertaken to minimize the likelihood of an incidental take of a listed species. A project that is determined by NMFS or USFWS to jeopardize the continued existence of a listed species cannot be approved under a BO.

Where a federal agency is not authorizing, funding, or carrying out a project, take that is incidental to the lawful operation of a project may be permitted pursuant to Section 10(a) of ESA through approval of a habitat conservation plan (HCP).

ESA requires the federal government to designate “critical habitat” for any species it lists under the ESA. “Critical habitat” is defined as: 1) specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to the species conservation, and those features that may require special management considerations or protection; and 2) specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.

Biological Opinions As described above, BOs are prepared through formal consultation under Section 7 of the ESA (described above) by either NMFS or USFWS in response to a federal action affecting a listed species.

The Coordinated Long-Term Operation of the CVP and State Water Project (SWP) is currently subject to the terms and conditions of the BOs issued by USFWS (2008) and NMFS (2009) pursuant to Section 7 of the Federal ESA. These BOs control operation of the CVP and SWP Sacramento-San Joaquin River Delta (Delta) pumps and consequently storage levels in San Luis Reservoir and deliveries to CVP and SWP contractors. The BOs requires maximum transfer volume to be limited to 600,000 acre-feet (AF) for critical and dry years and to 360,000 AF for all other year types.

In 2011, these BOs were remanded by court order to the federal fish and wildlife agencies for revision, these decisions were appealed to the Ninth Circuit Court of Appeals and in 2014 the orders to rewrite the BOs were reversed (Congressional Research Service 2014). The Ninth Circuit decision affirmed the requirement that Reclamation complete an EIS on implementing the BOs by December 1, 2015 (Congressional Research Service 2014). The Final EIS was published on November 23, 2015 and the Record of Decision was signed on January 11, 2016 (Reclamation 2016a).

C.1.11 Executive Order 11990, Protection of Wetlands

EO 11990 requires Federal agencies to take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. This requirement extends to actions involved with construction activities or increased storage in existing reservoirs which would affect wetlands. Federal agencies must provide opportunities for early public review of any plans or proposals for new construction in wetlands.

C.1.12 Executive Order 11988, Floodplain Management

EO 11988 (*Floodplain Management*) addresses floodplain issues related to human safety, health, and welfare. It requires Federal agencies to avoid adverse impacts due to occupancy and modification of floodplains and support of development within floodplains (FEMA 2015). The EO also encourages the restoration and preservation of the beneficial aspects of floodplains through the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements; and
- conduct federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation and licensing activities.

C.1.13 Executive Order 13007

EO 13007 states that in managing Federal lands, each executive branch agency with statutory or administrative responsibility for those lands will accommodate access to and ceremonial use of Native American sacred sites by religious practitioners and will avoid adversely affecting the physical integrity of such sites. Under EO 13007, Federal lands encompass any lands owned by the US, including leasehold interests, with the exception of Native American trust lands. A Native American or “Indian” tribe under EO 13007 is considered any Native American or Alaskan tribe, band, pueblo, village, or community acknowledged by the Secretary of the Interior pursuant to 25 USC Section 479a. “Sacred sites”

are regarded as those identified by a Native American tribe or individual to be sacred by virtue of their established religious significance to, or ceremonial use by, a Native American religion. The American Indian Religious Freedom Act of 1978 also allows access to sites of religious importance to Native Americans.

C.1.14 Executive Order 13783, Promoting Energy Independence and Economic Growth

Section 3 of EO 13783 rescinds certain energy and climate-related presidential and regulatory actions. Actions that were revoked include EO 13653, Preparing the United States for the Impacts of Climate Change, and CEQ guidance entitled “Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews.”

C.1.15 Federal Water Project Recreation Act

The Federal Water Project Recreation Act requires Federal agencies with authority to approve water projects to include recreation development as a condition of approving permits. Recreation development must be considered along with any navigation, flood control, reclamation, hydroelectric, or multipurpose water resource project. The act states "consideration should be given to opportunities for outdoor recreation and fish and wildlife enhancement whenever any such project can reasonably serve either or both purposes consistently" (Reclamation 2011).

C.1.16 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) of 1946 requires Federal agencies to provide for protection and supply of wildlife and wildlife resources, including the provision of public shooting and fishing recreation resources. It requires that fish and wildlife resources receive equal consideration to other project features. It also requires Federal agencies that construct, license or permit water resource development projects to first consult with the USFWS, NMFS, and State fish and wildlife agencies regarding the impacts on fish and wildlife resources and measures to mitigate these impacts. Under the FWCA, the USFWS coordinates with other agencies (e.g., NMFS and California Department of Fish and Wildlife [CDFW]) to ensure that the recommendations in the FWCA report reflects a more inclusive report that includes an evaluation of impacts on fish and wildlife from the project, required mitigation measures, and other recommendations to address these impacts.

C.1.17 Magnuson-Stevens Fishery Conservation and Management Act

The Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (Magnuson-Stevens Act)

(P.L. 94-256 or 10 USC 1801 et seq.) require heightened consideration of habitat for commercial fish species in resource management decisions. EFH is defined in the Magnuson-Stevens Act as “those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity.” NMFS interprets EFH to include aquatic areas and their associated physical, chemical, and biological properties used by fish that are necessary to support a sustainable fishery and the contribution of the managed species to a healthy ecosystem. The Magnuson-Stevens Act and its implementing regulations (50 CFR § 600.92[j]) require that before a Federal agency may authorize, fund, or carry out any action that may adversely affect EFH, it must consult with NMFS. The purpose of the consultation is to develop conservation recommendations that address reasonably foreseeable adverse effects on EFH. Freshwater EFH for Pacific salmonids includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically, accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers, and long-standing impassable natural barriers. For the purposes of this Project, the EFH provisions of the Magnuson-Stevens Act would apply to Chinook salmon.

C.1.18 Memorandum of April 29, 1994, “Government-to-Government Relations with Native American Tribal Governments”

President William J. Clinton’s 1994 memorandum, “Government-to-Government Relations with Native American Tribal Governments,” directed Reclamation to assess the effect of its programs on tribal trust resources and Federally-recognized tribal governments. Reclamation is tasked with actively engaging Federally-recognized tribal governments and consulting with such tribes on a government-to-government level (59 FR 1994).

C.1.19 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) decrees that all migratory birds and their parts (including eggs, nests and feathers) are fully protected. The MBTA protects nearly all native North American bird species. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. Under the MBTA, surveys are required to determine whether nests will be disturbed and, if so, a buffer area with a specified radius around the nest must be established so that no disturbance or intrusion is allowed until the young have fledged and left the nest. The size of the buffer area would vary depending on species and local conditions (e.g., presence of busy roads) and the professional judgment of the project biologist. Coordination with the USFWS is recommended for establishing an appropriate buffer. Several species of migratory birds are known to occur in the area of analysis.

C.1.20 Native American Graves Protection and Repatriation Act

Native American Graves Protection and Repatriation (NAGPRA) of 1990 and its implementing regulations (43 CFR Part 10) require Federal agencies and museums to inventory human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony and to provide affiliated tribes with an inventory of those cultural items. It further requires that those cultural items be repatriated upon the request of affiliated, Federally recognized tribes. If Native American human remains or NAGPRA cultural items are discovered on Federal lands, the agency must notify Federally recognized Native American tribal leaders of the discovery and provide them with an opportunity to claim affiliation with and priority of custody for those remains and items.

C.1.21 National Environmental Policy Act

Under NEPA, economic or social effects must be discussed if they are inter-related to the natural or physical environmental effects of a project. NEPA states the following with regard to analysis of economic effects (Title 40, CFR, Section 1508.14):

“...economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.”

Since economic effects of the project are related to physical environmental effects, a NEPA economic analysis is required.

NEPA (42 USC Section 4371 et seq.) also requires Federal agencies to foster environmental quality and preservation. Section 101(b)(4) declares that one objective of the national environmental policy is to “preserve important historic, cultural, and natural aspects of our national heritage....” For any major Federal actions significantly affecting environmental quality, Federal agencies must prepare and make available for public comment an EIS.

C.1.22 National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide affordable flood insurance to property owners and encourage communities to comply with FEMA regulations including enforcement of floodplain management regulations (FEMA 2016a). FEMA issues Flood Insurance Rate Maps (FIRMs) for communities participating in NFIP. These maps delineate flood hazard zones in the community. Flood zones are defined as follows (FEMA 2016b):

- **Undetermined Risk Areas: Zone D** includes areas where flooding could happen although the flood risks are undetermined because no analysis has been conducted (FEMA 2011).
- **Minimal Flood Hazard Areas: Zones C and X (unshaded)** are defined as areas of minimal flood hazard above the 500-year flood level.
- **Moderate Flood Hazard Areas: Zones B and X (shaded)** are defined as areas of moderate flood hazard usually located between the limits of the 100-year and 500-year floodplain.
- **Special Flood Hazard Areas (SFHA):** is defined as areas with a one percent annual chance of flooding (100-year floodplain); these areas are designated on the FIRM as Zones A, AO, AH, A1-A-30, AE, A99, AR, AR/AE, AR/AO, AR/A1-A30, AR/A, V, VE or V1-V30.

C.1.23 National Historic Preservation Act

The NHPA of 1966 (54 USC Section 300101 et seq.) requires Federal agencies to consider the preservation of prehistoric and historic period resources. The NHPA authorizes the Secretary of the Interior to expand and maintain the NRHP, and it establishes the ACHP as an independent Federal entity. Section 106 of the Act (54 USC Section 300108) requires Federal agencies to take into account the effects of their undertakings on historic properties and affords the ACHP an opportunity to comment on the undertaking prior to the licensing or approval of the expenditure of funds on any undertaking that may affect properties listed, or eligible for listing, in the NRHP. The implementing regulations at 36 CFR Part 800 identify the steps that must be followed to comply with Section 106 of the NHPA. These steps include consultation with the SHPO.

Section 106 regulations allow Federal agencies to conduct “nondestructive project planning activities before completing compliance with Section 106” (36 CFR 800.1[c]), provided any subsequent consideration of alternatives to avoid, minimize, or mitigate adverse effects is not restricted during the planning process. Feasibility studies, and environmental studies conducted in support of such studies, are considered planning activities that do not require completion of the Section 106 process. If and when Congress authorizes a SLLPIP alternative,

that undertaking will be subject to NHPA Section 106 compliance, to include consultation with the SHPO and other Section 106 consulting parties as required. Section 106 of the NHPA requires Federal agencies to consider the effects of the undertaking on historic properties and to afford the ACHP and the SHPO a reasonable opportunity to comment on any undertaking that would adversely affect properties listed or eligible for listing in the NRHP. Section 302706 (a) of the NHPA allows properties of traditional religious and cultural importance to Indian tribes to be determined eligible for inclusion in the NRHP. Under the NHPA, a “historic property” or significant cultural resource is one that meets the following NRHP criteria (36 CFR Part 60.4):

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history, or
- B. That are associated with the lives of persons significant in our past, or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

The Federal review of projects is typically referred to as the Section 106 process. Section 106 review normally involves a four-step procedure that is detailed in the implementing regulations (36 CFR Part 800):

1. *Establish undertaking.* Determine whether the proposed Federal action is an undertaking;
2. *Identification of historic properties.* Determine scope of identification efforts, phased identification and evaluation, evaluate historic significance, results of identification and evaluation;
3. *Assessment of adverse effects.* Apply criteria of adverse effect, finding of no adverse effect, consulting party review, results of assessment;
4. *Resolution of adverse effects.* Continue consultation, resolve adverse effects, memorandum of agreement.

Once cultural resources are identified in the project area of potential effects (APE), they must be evaluated under the four NRHP criteria found at 36 CFR

Part 60.4 pursuant to 36 CFR Part 800.4(c). If the agency determines historic properties are within the APE, then the effect of the undertaking on historic properties is assessed as outlined in 36 CFR 800.5. The effect can be either no adverse effect or adverse effect. Adverse effects must be resolved in consultation with and through agreement among the responsible Federal agency or agencies, the SHPO, and other Section 106 consulting parties pursuant to 36 CFR Part 800.6.

C.1.24 National Park Service Regulations

National Park Service (NPS) Regulations (36 CFR Part 60) set forth procedures for nominating properties to the NRHP and present the criteria to be applied in evaluating the eligibility of prehistoric and historic period resources for listing in the NRHP.

C.1.25 Noise and Vibration Legislation

In the past, the USEPA coordinated all Federal noise control activities through its Office of Noise Abatement and Control. However, in 1981, Congress concluded that noise issues were best handled at the State or local government level. As a result, the USEPA phased out the office's funding in 1982 as part of a shift in Federal noise control policy to transfer the primary responsibility of regulating noise to State and local governments. However, the Noise Control Act of 1972 and the Quiet Communities Act of 1978 were not rescinded by Congress and remain in effect today, although essentially unfunded. Additionally, Title IV – Noise Pollution, of the Clean Air Act provides guidance to State and local entities in establishing appropriate noise control standards.

C.1.26 Principles and Requirements for Federal Investments in Water Resources

Furthermore, Reclamation is subject to *Principles and Requirements for Federal Investments in Water Resources* (CEQ 2013). This document requires areas of risk and uncertainty to be identified, described, and considered when analyzing potential investments in water resources. It specifically requires climate change impacts to be accounted for and addressed.

C.1.27 Real-Time Decision-Making to Assist Fishery Management

Reclamation and the California Department of Water Resources (DWR) work closely with USFWS, NMFS, CDFW, and other agencies to coordinate the operation of the CVP and SWP with fishery needs. This coordination is facilitated through several forums, as discussed below.

CALFED Water Operations Management Team The Water Operations Management Team (WOMT) was established to facilitate decision making at the appropriate levels and provide timely support of decisions. This team,

which first met in 1999, consists of management-level participants from Reclamation, DWR, USFWS, NMFS, and CDFW. The WOMT meets frequently to provide oversight and decision making that must routinely occur within the CALFED Ops Group process. The WOMT relies heavily on other teams and work groups for recommendations on fishery actions. It also uses the CALFED Ops Group (see below) to communicate with stakeholders about its decisions. Although the goal of the WOMT is to achieve consensus on decisions, the agencies retain their authorized roles and responsibilities.

CALFED Ops Group The CALFED Ops Group consists of participants from Reclamation, DWR, USFWS, NMFS, CDFW, the SWRCB, and the USEPA. The CALFED Ops Group generally meets 11 times a year in a public setting to discuss CVP and SWP operations, Central Valley Project Improvement Act (CVPIA) implementation, and coordination with efforts to protect endangered species. The CALFED Ops Group held its first public meeting in January 1995, and during the next six years the group developed and refined its process. The CALFED Ops Group is recognized within D-1641 and elsewhere as a forum where agencies can consult and achieve consensus on coordinating CVP and SWP operations with endangered species, water quality, and CVPIA requirements. Decisions made by the CALFED Ops Group have been incorporated into the Delta standards to protect beneficial uses of water (e.g., export/inflow ratios and some closures of Delta Cross Channel [DCC] gates).

Several teams were established as part of the CALFED Ops Group. These teams are described below.

Operations and Fishery Forum The stakeholder-driven Operations and Fishery Forum disseminates information about recommendations and decisions regarding CVP and SWP operations. Forum members are considered the contact people for their respective agencies or interest groups when the CALFED Ops Group needs to provide information about take of listed species or address other topics or urgent issues. Alternatively, the CALFED Ops Group may direct the Operations and Fishery Forum to recommend operational responses to issues of concern raised by member agencies.

Data Assessment Team The Data Assessment Team consists of technical staff members from the agencies and stakeholders. The team meets frequently during the fall, winter, and spring to review and interpret data relating to fish movement, location, and behavior. Based on its assessments and information about CVP and SWP operations, the Data Assessment Team recommends potential changes in operations to protect fish.

B2 Interagency Team The B2 Interagency Team was established in 1999 and consists of technical staff members from the agencies within the CALFED Ops group. The team meets weekly to discuss implementation of Section 3406(b)(2) of the CVPIA, which defines the dedication of CVP water supply for environmental purposes. It communicates with the WOMT to ensure

coordination with the other operational programs or resource-related aspects of project operations.

Fisheries Technical Teams Several fisheries-specific teams have been established to provide guidance on resource management issues. These teams are described below.

The Sacramento River Temperature Task Group The Sacramento River Temperature Task Group (SRTTG) is a multiagency group formed pursuant to SWRCB Water Right Orders 90-5 and 91-1 to help improve and stabilize the Chinook salmon population in the Sacramento River. Reclamation develops temperature operation plans each year for the Shasta and Trinity divisions of the CVP. These plans consider impacts of CVP operations on winter-run and other races of Chinook salmon. The SRTTG meets in the spring to discuss biological and operational information, objectives, and alternative operations plans for temperature control, then recommends an operations plan for temperature control. Reclamation then submits a report to the SWRCB, generally on or before June 1 each year.

After the operations plan is implemented, the SRTTG may perform additional studies and hold meetings to revise the plan based on updated biological data, reservoir temperature profiles, and operations data. Updated plans may be needed for summer operations to protect winter-run Chinook salmon, or in fall for the fall-run spawning season. If any changes are made to the plan, Reclamation submits a supplemental report to the SWRCB.

Delta Operations for Salmonids and Sturgeon Group The Delta Operations for Salmonids and Sturgeon (DOSS) group was established from Action IV.5 in the Reasonable and Prudent Alternatives (RPA) in the NMFS BO. Their responsibilities are to advise the WOMT and NMFS on measures to reduce adverse effects from Delta operations of the CVP and the SWP to salmonids and green sturgeon. DOSS coordinates the work of other technical teams to provide expertise on issues pertinent to Delta water quality, hydrology, and environmental parameters. The DOSS is responsible to: 1) provide recommendations for real-time management of operations to WOMT and NMFS, consistent with implementation procedures provided in the RPA; 2) track and evaluate the effectiveness of the implementation of Actions IV.1 through IV.4 (DCC operations, Delta flow management, entrainment reductions, and infrastructure/operations modifications at the CVP/SWP fish facilities); 3) conduct annual reviews of Delta operations and data collection from ongoing monitoring programs; 4) oversee the implementation of the acoustic tag experiment for San Joaquin fish; 5) coordinate with the Delta Smelt Working Group to maximize benefits to all special-status fishes; and, 6) coordinate with the other technical teams identified in the RPA to ensure consistent implementation of the RPA.

Delta Smelt Working Group The Delta Smelt Working Group was established in 1995 to resolve biological and technical issues regarding delta smelt and to develop recommendations for consideration by USFWS. The working group generally acts when Reclamation and DWR seek consultation with USFWS on delta smelt or when unusual salvage of delta smelt occurs. It also has assisted in developing strategies to improve habitat conditions for delta smelt.

The Delta Smelt Working Group employs a delta smelt decision tree when forming recommendations to send to the WOMT. The working group does not decide what actions will be taken and does not supplant the Data Assessment Team, but merely provides additional advice to the WOMT. The group may propose operations modifications that it believes will protect delta smelt, either by reducing take at the export facilities or by preserving smelt habitat. The decision tree is adapted by the working group as new knowledge becomes available.

American River Operations Work Group In 1996, Reclamation established an operational working group for the lower American River, known as the American River Operations Work Group. Although open to anyone, the work group's meetings generally include representatives from several agencies and organizations with ongoing concerns about management of the lower American River: Reclamation, USFWS, NMFS, CDFW, the Sacramento Area Flood Control Agency, the Water Forum, the City of Sacramento, Sacramento County, the Western Area Power Administration, and the Save the American River Association. The American River Operations Work Group convenes at least monthly to provide fisheries updates and reports to enable Reclamation to better manage Folsom Lake for fish resources in the lower American River.

C.1.28 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976, administered by the USEPA, governs the disposal of solid and hazardous waste. Under RCRA, the USEPA was given authority of "cradle-to-grave" control of hazardous waste and this is the current approach for hazardous waste management. Three programs were established under RCRA including the solid waste program, hazardous waste program, and underground storage tank (UST) program. Under the law, controls for the generation, transport, treatment, storage, and disposal of hazardous waste are strictly mandated. Only active and future facilities are controlled under RCRA (USEPA 2015b).

There have been three amendments to RCRA, including the Hazardous and Solid Waste Amendments of 1984, the Federal Facility Compliance Act of 1992, and the Land Disposal Program Flexibility Act of 1996 (USEPA 2015b).

C.1.29 Safe Drinking Water Act

The Federal Safe Drinking Water Act (SDWA) was enacted in 1974 to protect the quality of drinking water in the United States (U.S.). This law focuses on all waters actually or potentially designated for drinking use, whether from above ground or underground sources. The SDWA authorized the USEPA to establish safe standards of purity for specified contaminants and required all owners or operators of public water systems to comply with primary (health-related) standards. State governments, which assume this power from the USEPA, also encourage attainment of secondary standards (nuisance-related). Contaminants of concern in a domestic water supply are those that either pose a health threat or in some way alter the aesthetic acceptability of the water. These types of contaminants are currently regulated by the USEPA through primary and secondary maximum contaminant levels (MCLs). As directed by the SDWA amendments of 1986, the USEPA has been expanding its list of primary MCLs. MCLs have been proposed or established for approximately 100 contaminants.

C.1.30 San Luis Reservoir State Recreation Area

Through an agreement between Reclamation and the California Department of Parks and Recreation (CDPR), a Resource Management Plan/General Plan (RMP/GP) was prepared for the San Luis Reservoir State Recreation Area (SRA) and adjoining Reclamation land (Reclamation and CDPR 2013). These areas are managed by State agencies including CDPR, DWR, CDFW, and Reclamation. Elements of the plan include limiting areas of future development and avoiding environmentally sensitive areas. The aesthetic resource goals of the plan include:

- Preserve scenic vistas that overlook open land and water through the identification and definition of significant vista points and viewsheds (Goal RES-S1).
- Maintain large expanses of open space free of visual and physical interruptions (Goal RES-S2).
- Make new structures architecturally compatible with their use as recreation facilities and distinguishable from the water operations structures but in keeping with overall site character (Goal RES-S3).
- Identify a common and unified set of site-related details and materials (signage, gates, surface materials, fences, etc.) so that new facilities and infrastructure are compatible with the character of the site and are distinctive for recreation facilities (Goal RES-S4).
- Prevent aesthetic and environmental damage from duration and intensity of lighting and fixtures (Goal RES-S5).

C.1.31 Stage 1 and Stage 2 Disinfectants and Disinfection Byproducts Rules (D/DBPR) and Long-Term 1 and 2 Enhanced Surface Water Treatment Rules (LT1ESWTR and LT2ESWTR)

While disinfectants are effective in controlling many microorganisms, certain types react with natural organic and inorganic matter in source water and distribution systems to form Disinfection Byproducts (DBPs).

The Stage 1 D/DBPR updates and supersedes the 1979 regulations for total trihalomethanes. In addition, it is intended to reduce exposure to three disinfectants and many DBPs. The D/DBPR establishes maximum residual disinfectant level goals and maximum residual disinfectant levels for three chemical disinfectants – chlorine, chloramine and chlorine dioxide (Table 4-1). It also establishes maximum contaminant level goals (MCLGs) and MCLs for total trihalomethanes, haloacetic acids, chlorite, and bromate (Table C-3).

Table C-3. Maximum Contaminant Levels (MCLs) and Maximum Residual Disinfectant Levels (MRDLs) for Stage 1 Disinfectants and Disinfection Byproducts Rule

Disinfectant Residual	MCL (mg/L)	MRDL (mg/L)
Chlorine		4.0 (as Cl ₂)
Chloramine		4.0 (as Cl ₂)
Chlorine Dioxide		0.8 (as ClO ₂)
Total trihalomethanes (TTHM) 1	0.080	
Haloacetic acids (five) 2	0.060	
Dichloroacetic acid	0	
Chlorite	1.0	
Bromate	0.010	

Source: USEPA 2002d.

mg/L = milligrams per liter

MCL = Maximum Contaminant Level

MRDL = Maximum Residual Disinfectant Level

¹ Total trihalomethanes is the sum of the concentrations of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

² Haloacetic acids (five) are the sum of the concentrations of the mono-, di-, and trichloroacetic acids and mono- and dibromoacetic acids.

Water systems that use surface water, or groundwater under the direct influence of surface water, and that use conventional filtration treatment are required to remove specified percentages of organic materials, measured as total organic carbon (TOC), that may react with disinfectants to form DBPs (Table C-4). Removal is to be achieved through application of a treatment technique (e.g., enhanced coagulation or enhanced softening), unless the system meets alternative criteria.

Table C-4. Required Removal of Total Organic Carbon by Enhanced Coagulation and Enhanced Softening for Subpart H Systems Using Conventional Treatment¹ Recent Required Removal of TOC

Source Water TOC (mg/L)	Source Water Alkalinity (mg/L as CaCO ₃)		
	0-60	>60-120	>120 ²
>2.0-4.0	35%	25%	15%
>4.0-8.0	45%	35%	25%
>8.0	50%	40%	30%

Source: USEPA 1998b.

CaCO₃ = calcium carbonate

mg/L = milligrams per liter

TOC = Total Organic Carbon

¹ Systems meeting at least one of the alternative compliance criteria in the rule are not required to meet the removals in this table.

² Systems practicing softening must meet these TOC removal requirements.

The Stage 2 DBPR mandates stricter compliance monitoring requirements for Trihalomethanes (THMs) and Haloacetic Acids (HAA5) and targets public water systems considered at the highest risk.

The federal LT1ESWTR provides increased public health protection against microbial pathogens, specifically the protozoan *Cryptosporidium*. The federal LT1ESWTR is a counterpart to the federal Interim Enhanced Surface Water Treatment Rule (IESWTR) and applies to public water systems (PWS) using surface water or ground water under the direct influence (GWUDI) and serving fewer than 10,000 persons.

The Long Term 1 Enhanced SWTR provisions include the following:

- MCLG of zero for *Cryptosporidium*;
- 2-log *Cryptosporidium* removal requirements for systems that filter;
- Strengthened performance standards and individual filter turbidity monitoring provisions;
- Disinfection benchmark provisions to assure continued levels of microbial protection while facilities take necessary steps to comply with new DBP standards;
- Inclusion of *Cryptosporidium* in the definition of groundwater under the direct influence of surface water and additional avoidance criteria for unfiltered public water systems;
- Requirements for covers on new finished water reservoirs; and
- Sanitary surveys for all surface water and groundwater under the direct influence of surface water systems regardless of size.

The federal LT2ESWTR provides increased public health protection through control of microbial contaminants by focusing on PWS with elevated Cryptosporidium risk and by preventing significant increases in microbial risk that might otherwise occur when systems implement the federal Stage 2 Disinfectants and Disinfection Byproducts Rule. The federal LT2ESWTR applies to PWS using surface water or GWUDI (California Department of Public Health [CDPH] 2013). The CDPH required compliance with Stage 2 DBP rules by 2012-2013, dependent on population served by the system.

C.1.32 Superfund Amendments and Reauthorization Act

In 1986, the Superfund Amendments and Reauthorization Act (SARA), allowed CERCLA to continue with cleanup of sites and added several amendments. SARA made changes to CERCLA with regard to enforcement authorities and settlement tools. In addition, SARA emphasized the implementation of permanent remediation with the use of innovative treatment technologies for cleanup of hazardous waste sites; increased State coordination with Superfund programs; increased focus on affects to human health by hazardous waste sites; and encouraged the greater public to participate in decision making about site cleanup (USEPA 2015a).

C.1.33 Surface Water Treatment Rule

The Federal Surface Water Treatment Rule (SWTR) became effective on June 19, 1989. The California Surface Water Treatment Rule (California SWTR), which implements the Federal SWTR within the State, became effective in June 1991. The California SWTR satisfies three specific requirements of the SDWA. First, it establishes criteria for determining when filtration is required for surface waters. Second, it defines minimum levels of disinfection for surface waters. Third, it addresses Giardia lamblia, viruses, Legionella, turbidity, and heterotrophic plate count by setting a treatment technique. It is appropriate to set a treatment technique in lieu of an MCL for a contaminant when it is not technologically or economically feasible to measure that contaminant. For example, methods to accurately detect Giardia lamblia are very time-consuming and costly, and may not be accurate. The SWTR is based on providing treatment to achieve a minimum theoretical percent removal/inactivation of 99.9 percent (3 log) of Giardia lamblia and 99.99 percent (4 log) of viruses. Treatment required includes the use of a filtration system, unless very stringent source water quality and site-specific conditions are met. The level of treatment needed to meet the 3- and 4-log removal must be achieved by disinfection processes.

Certain chemical disinfectants used to treat Giardia lamblia and viruses can react with naturally-occurring materials in the water to form unintended byproducts. These byproducts may pose health risks. Amendments to the SDWA in 1996 require USEPA to develop rules to balance the risks between microbial pathogens and DBPs. The intent of these amendments is to

strengthen public health protection against microbial contaminants, and at the same time, reduce potential health risks of DBPs. The Stage 1 Disinfectants and Disinfection Byproducts Rule (Stage 1 D/DBPR) and Interim Enhanced SWTR, announced in December 1998, are the first of a set of rules under the 1996 SDWA Amendments.

C.1.34 United States Department of the Interior, Bureau of Reclamation National Environmental Policy Act Handbook

The Reclamation *NEPA Handbook* (Reclamation 2012) recommends that climate change be considered, as applicable, in every NEPA analysis. The *NEPA Handbook* acknowledges that there are two interpretations of climate change in regards to Reclamation actions: 1) Reclamation's action is a potentially significant contributor to climate change and 2) climate change could affect a Reclamation proposed action. The *NEPA Handbook* recommends considering different aspects of climate change (e.g., relevance of climate change to the proposed action, timeframe for analysis, and relevant regional/local projections of climate change) to determine the extent to which it should be discussed under NEPA.

C.1.35 United States Department of the Interior, Bureau of Reclamation Safety of Dams Act

The Safety of Dams Act of 1978 as amended gives Reclamation authority to modify dams and other actions to reduce the risk related to dam failure (Reclamation 2016b). Reclamation's Safety of Dams Program ensures regular monitoring, examination and evaluation of dam performance to identify potential risks to the public, property or the environment. The evaluation considers loading conditions and the consequences of structural dam failure. Unreasonable risks require corrective actions to be developed and implemented. The Safety of Dams Process entails a four-phased approach including: comprehensive and periodic inspections and reviews every 8 and 4 years respectively; issues evaluation which may include additional studies; corrective action study as recommended by the issues evaluation; and design/modification as recommended in the corrective action study (Reclamation 2016c). A Corrective Action Study of B.F. Sisk Dam is underway by Reclamation in collaboration with DWR (Reclamation 2016d).

C.1.36 United States Department of the Interior, Climate Change Adaptation Plan

In 2014, U.S. Department of Interior (DOI) released its Climate Change Adaptation Plan, which focuses on the department's work to address climate change through implementation of EO 13653 (since rescinded) and its Climate Change Adaptation Policy (523 DM 1). The plan summarizes DOI's efforts to address climate-related risks and demonstrates its efforts to modernize programs to support climate resilience investment (DOI 2014).

C.1.37 United States Department of the Interior Plan for a Coordinated, Science-Based Response to Climate Change Impacts on Our Land, Water, and Wildlife Resources

DOI subsequently released *Interior's Plan for a Coordinated, Science-Based Response to Climate Change Impacts on Our Land, Water, and Wildlife Resources*. The plan provides a framework for DOI's conservation strategies related to climate change. DOI relies on three main resources – climate change impact science, data integration and dissemination, and enabling science-based adaptation strategies – to implement its vision. As part of its response to climate change, DOI established Climate Science Centers and Landscape Conservation Cooperatives to form the foundation of an integrated approach to climate change science and adaptation (DOI no date).

C.1.38 United States Department of the Interior, Secretarial Order No. 3215

In 2000, the DOI issued a Secretarial Order, Principles for the Discharge of the Secretary's Trust Responsibility, assigns responsibility for ensuring protection of ITAs to the heads of bureaus and offices (DOI 2000). Reclamation is required to "protect and preserve Indian trust assets from loss, damage, unlawful alienation, waste, and depletion" (DOI 2000).

C.1.39 United States Department of the Interior Secretarial Order No. 3289, Amendment No. 1

In 2009, the DOI issued a Secretarial Order on climate change that expands DOI bureaus' responsibilities in addressing climate change (amended on February 22, 2010). The purpose of Secretarial Order No. 3289 is to provide guidance to bureaus and offices within the DOI on how to provide leadership by developing timely responses to emerging climate change issues. This Order replaces Secretarial Order No. 3226, signed on January 19, 2001, entitled "Evaluating Climate Change Impacts in Management Planning." It reaffirms efforts within DOI that are ongoing with respect to climate change. Among the requirements of the Order is one that requires each bureau and office of DOI to "consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, and/or when making major decisions affecting DOI resources" (DOI 2010).

C.1.40 United States Department of the Interior Secretarial Order No. 3360

In 2017, the DOI issued a Secretarial Order that continues the implementation of EO 13783 by rescinding documents inconsistent with EO 13783. The order rescinds Departmental Manual Part 523, Chapter 1: Climate Change Policy, and directs each bureau and office to review all existing regulations, orders, guidance documents, policies, instructions, notices, and implementing actions

that are inconsistent with EO 13783 and initiate a process to suspend, revise, or rescind any such actions (DOI 2017).

C.2 State Requirements

C.2.1 Alquist-Priolo Earthquake Fault Zoning Act

The 1972 Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code [PRC] Section 2621 *et seq.*) requires local agencies to regulate development within earthquake fault zones to reduce the hazards associated with surface fault ruptures. It also regulates construction in earthquake fault zones.

C.2.2 California Air Resources Board Scoping Plan

The initial California Air Resources Board (CARB) Scoping Plan (CARB 2008) provides a framework for the State's strategy to reduce GHG emissions to 1990 levels by 2020. This reduction goal means reducing GHG emissions by approximately 30 percent from business-as-usual emission levels projected for 2020 or approximately 15 percent from 2005 levels. Key features of the State's plan for reducing emissions include six main recommendations:

- Expand and strengthen existing energy efficiency programs and building and appliance standards
- Achieve a statewide renewables energy mix of 33 percent
- Develop a cap-and-trade program that links other partner programs to create a regional market system
- Establish targets for transportation-related GHG emissions for regions throughout the State, and pursue policies and incentives to achieve those targets
- Adopt and implement measures, including California's clean car standards, goods movement measures, and the low carbon fuel standard
- Create targeted fees to fund the administrative costs of the State's long-term commitment to Assembly Bill 32 implementation

The Scoping Plan recommends 39 measures that would achieve an emissions reduction of 174 MMTCO_{2e}/year if fully implemented. The recommended measures cover nine sectors: 1) transportation, 2) electricity and natural gas, 3) green buildings, 4) water, 5) industry, 6) recycling and waste management, 7)

forests, 8) high GWP gases³, and 9) agriculture. Additionally, nine discrete early actions were adopted to reduce GHG emissions.

The First Update to the Climate Change Scoping Plan (CARB 2014b) builds on the 2008 Scoping Plan by identifying the next steps that are required to meet the State's emission reductions beyond 2020 (i.e., 80 percent below 1990 levels by 2050). The update adjusts the 2020 statewide limit to 431 MMTCO_{2e} to reflect updated GWPs.

In November 2017, CARB finalized *California's 2017 Climate Change Scoping Plan* to describe potential policies that could be implemented to achieve the 2030 target established by EO B-30-15 (CARB 2017c).

C.2.3 California Assembly Bill 32

California AB 32, the Global Warming Solutions Act of 2006, codifies the State's GHG emissions targets by requiring the State's global warming emissions to be reduced to 1990 levels by 2020 and directs CARB to enforce the statewide cap that would begin phasing in by 2012. In 2007, CARB recommended and adopted a 1990 Greenhouse Gas (GHG) emissions level and 2020 emissions limit of 427 million metric tons CO_{2e} (MMTCO_{2e}); however, this limit has subsequently been updated to 431 MMTCO_{2e} using the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report global warming potentials (GWPs) (CARB 2017a). The limit is a statewide limit and does not require individual sectors or facilities to reduce emissions equally. Key AB 32 milestones are as follows (CARB 2014):

- January 1, 2009 – Scoping Plan adopted indicating how emissions will be achieved from significant sources of GHGs via regulations, market mechanisms, and other actions.
- During 2009 – CARB staff drafted rule language to implement its plan and held a series of public workshops on each measure (including market mechanisms).
- January 1, 2010 – Early action measures took effect.
- During 2010 – CARB conducted series of rulemakings, after workshops and public hearings, to adopt GHG regulations including rules governing market mechanisms.
- January 1, 2011 – Completion of major rulemakings for reducing GHGs including market mechanisms.

³ GWP is a metric that measure how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to 1 ton of CO₂.

- January 1, 2012 – GHG rules and market mechanisms adopted by CARB take effect and are legally enforceable.
- November 14, 2012 – CARB held first quarterly auction of GHG emissions allowances as part of the cap-and-trade program.
- January 1, 2013 – Cap-and-trade program began with a GHG emissions cap that declines over time.
- September 17, 2013 – CARB issued first carbon offset credits as part of the cap-and-trade program.
- May 22, 2014 – CARB approved First Update to the Climate Change Scoping Plan.
- December 31, 2020 – Deadline for achieving 2020 GHG emissions cap.

CARB has been proactive in its implementation of AB 32 and has met each of the milestones identified above that have already passed and is on track to meet the last milestone.

C.2.4 California Building Code

Minimum standards for structural design and construction are outlined in the California Building Standards Code (CBSC) (Title 24, California Code of Regulations). The CBSC is based on the Uniform Building Code (UBC), which is widely used throughout the United States and has been modified for California conditions with numerous, more detailed and/or more stringent regulations.

C.2.4.1 Geology, Seismicity, and Soils

The CBSC requires that “classification of the soil at each building site...be determined when required by the building official” and that “the classification be based on observation and any necessary test of the materials disclosed by borings or excavations.” In addition, the CBSC states that “the soil classification and design-bearing capacity shall be shown on the (building) plans, unless the foundation conforms to specified requirements.” The CBSC provides standards for various aspects of construction, including but not limited to excavation, grading, and earthwork construction; fill placement and embankment construction; construction on expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with California law, project design and construction would be required to comply with provisions of the CBSC.

C.2.4.2 Noise and Vibration

The Code provides acoustical regulations for both exterior-to-interior sound insulation, as well as sound and impact isolation between adjacent spaces of various occupied units. Title 24 regulations generally state that interior noise levels generated by exterior noise sources shall not exceed 45 A-weighted decibels (dBA) L_{dn} / Community Noise Equivalent Level (CNEL), with windows closed, in any habitable room for general residential uses.

C.2.5 California Clean Air Act

The California Clean Air Act (CCAA) substantially added to the authority and responsibilities of the State's air pollution control districts. The CCAA establishes an air quality management process that generally parallels the Federal process. The CCAA, however, focuses on attainment of the California Ambient Air Quality Standards (CAAQS) that, for certain pollutants and averaging periods, are typically more stringent than the comparable NAAQS. Table C-5 summarizes the CAAQS.

Table C-5. California Ambient Air Quality Standards

Pollutant	Averaging Time	CAAQS	Violation Criteria
O ₃	1 Hour	0.09 ppm (180 µg/m ³)	Not to be exceeded
O ₃	8 Hour	0.070 ppm (137 µg/m ³)	Not to be exceeded
PM ₁₀	24 Hour	50 µg/m ³	Not to be exceeded
PM ₁₀	Annual	20 µg/m ³	Not to be exceeded
PM _{2.5}	Annual	12 µg/m ³	Not to be exceeded
CO	1 Hour	20 ppm (23 mg/m ³)	Not to be exceeded
CO	8 Hour	9.0 ppm (10 mg/m ³)	Not to be exceeded
NO ₂	1 Hour	0.18 ppm (339 µg/m ³)	Not to be exceeded
NO ₂	Annual	0.030 ppm (57 µg/m ³)	Not to be exceeded
SO ₂	1 Hour	0.25 ppm (655 µg/m ³)	Not to be exceeded
SO ₂	24 Hour	0.04 ppm (105 µg/m ³)	Not to be exceeded
Pb	30-Day Average	1.5 µg/m ³	Not to be equaled or exceeded
Visibility Reducing Particles	8 Hour	See footnote 1	Not to be exceeded

Pollutant	Averaging Time	CAAQS	Violation Criteria
Sulfates	24 Hour	25 µg/m ³	Not to be equaled or exceeded
Hydrogen sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Not to be equaled or exceeded
Vinyl chloride	24 Hour	0.01 ppm (26 µg/m ³)	Not to be equaled or exceeded

Source: CARB 2016.

Note:

¹ In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

Key:

µg/m³ = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standard; CO = carbon monoxide; mg/m³ = milligrams per cubic meter; N/A = not applicable; NAAQS = National Ambient Air Quality Standard; NO₂ = nitrogen dioxide; O₃ = ozone; Pb = lead; PM₁₀ = inhalable particulate matter; PM_{2.5} = fine particulate matter; ppm = parts per million; SO₂ = sulfur dioxide

The CCAA requires that the CAAQS be met as expeditiously as practicable, but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

The air quality attainment plan requirements established by the CCAA are based on the severity of air pollution problems caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts.

CARB is responsible for developing emission standards for on-road motor vehicles and some off-road equipment in the State. In addition, CARB develops guidelines for the local districts to use in establishing air quality permit and emission control requirements for stationary sources subject to the local air district regulations.

C.2.6 California Department of Fish and Wildlife Species Designations

CDFW maintains an informal list of species called “species of special concern.” These are broadly defined as plant and wildlife species that are of concern to CDFW because of population declines and restricted distributions and/or because they are associated with habitats that are declining in California. These species are inventoried in the California Natural Diversity Database (CNDDDB) regardless of their legal status. Impacts on species of special concern may be considered significant.

C.2.7 California Department of Toxic Substances Control

The mission of the California Department of Toxic Substances Control (DTSC) is to protect California’s people and environment from harmful effects of toxic substances by restoring contaminated resources, enforcing hazardous waste

laws, reducing hazardous waste generation, and encouraging the manufacture of chemically safer products. The DTSC establishes standards for the management of hazardous waste, including regulation of the generation, transportation, and disposal of hazardous waste.

C.2.8 California Department of Water Resources, Division of Safety of Dams

At the State level, the responsibility for the supervision of dams and reservoirs is assigned to the DWR and delegated to the Division of Safety of Dams (DSOD). California Water Code Division 3 regulates alterations; repairs and maintenance; operation; and, removal of dams and reservoirs. Leroy Anderson Dam, on the Coyote Creek at Anderson Reservoir, falls under the jurisdiction of the State of California (Dam No. 72-009) (DWR 2014).

Through the Division of Flood Management, DWR conducts flood forecasting, and emergency response activities as well as permitting of flood protection projects. The Division of Flood Management coordinates with Federal, State, and local agencies to provide integrated flood management and emergency response systems throughout California as part of DWR's FloodSAFE California Program (DWR 2016).

C.2.9 California Department of Water Resources Non-Project Water Acceptance Criteria

Acceptance criteria has been developed by DWR to govern the water quality of non-Project water that may be conveyed through the California Aqueduct. These criteria require DWR to consult with SWP contractors and the CDPH on drinking water quality issues relating to non-Project water as needed to assure the protection of SWP water quality. DWR uses a two-tier approach for accepting non-Project water pumped into the California Aqueduct. Tier 1 programs have "no adverse impact" criteria and are tied to historical water quality levels in the California Aqueduct. Programs meeting all Tier 1 criteria are approved by DWR.

Tier 2 programs have water quality levels that exceed the historical water quality levels in the California Aqueduct and have potential to cause adverse effects to SWP contractors. Tier 2 programs are referred to a State water contract facilitation group for review. The facilitation group reviews the program and, if needed, makes recommendations to DWR during consideration of the project.

C.2.10 California Endangered Species Act

CDFW, formerly the California Department of Fish and Game (CDFG), is responsible for administration of the California Endangered Species Act (CESA). For projects that affect a species that is both State and Federal listed,

compliance with the Federal Endangered Species Act will satisfy the CESA if the CDFW determines that the Federal incidental take authorization is “consistent” with the CESA. Projects that result in a “take” of a State-listed species require an incidental take permit under the CESA. The State act also lends protection to species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat. The area of analysis is known to support species listed under the CESA.

Fully Protected Species under California Fish and Game Code – Protection of fully protected species is described in four sections of the California Fish and Game Code that list 37 fully protected species (California Fish and Game Code Sections 3511, 4700, 5050, and 5515). These statutes prohibit take or possession at any time of fully protected species.

C.2.11 California Energy Efficiency Strategic Plan

The California Public Utilities Commission (CPUC) created the California Energy Efficiency Strategic Plan as a framework to make energy efficiency a way of life in California by refocusing ratepayer-funded energy efficiency programs on achieving long-term savings through structural changes in the way Californians use energy (CPUC 2011). Plan sets forth a roadmap for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision and goals for each economic sector and identifies specific near-term, mid-term and long-term strategies to assist in achieving those goals. The four energy efficiency strategies include:

- All new residential construction in California will be zero net energy by 2020;
- All new commercial construction in California will be zero net energy by 2030;
- Heating, Ventilation and Air Conditioning (HVAC) will be transformed to ensure that its energy performance is optimal for California’s climate; and
- All eligible low-income customers will be given the opportunity to participate in the low income energy efficiency program by 2020 (CPUC 2011).

C.2.12 California Environmental Protection Agency Unified Program

The California Environmental Protection Agency (CalEPA) Unified Program was developed to protect Californians from hazardous waste and materials.

CalEPA has certified 83 local government agencies as California Unified Program Agencies (CUPAs), including Merced and Santa Clara counties' Environmental Health Departments, who are responsible for implementing the hazardous waste and materials standards for five different state agencies including: CalEPA, DTSC, Governor's Office of Emergency Services (CalOES), California Department of Forestry and Fire Protection (CalFire), and the SWRCB (CalEPA 2016a). Under the Unified Program, the administration, permit, inspection and enforcement activities are consolidated for the following environmental and emergency management programs (CalEPA 2016b).

- Aboveground Petroleum Storage Act (APSA) Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention (CalARP) Program
- Hazardous Materials Release Response Plans and Inventories (Business Plans [HMBP])
- Hazardous Material Management Plan (HMMP) and Hazardous Material Inventory Statements (HMIS) (California Fire Code)
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- Underground Storage Tank Program

A more in depth discussion of some of these programs that have applicability to the SLLPIP are described below.

C.2.12.1 Hazardous Material Management Plan and Hazardous Material Inventory Statements

The Hazardous Material Business Plans program mandates the creation of a planning document by businesses and other entities who handle hazardous materials of certain quantities. The Business Plan shall include, among other things, an inventory of hazardous materials, a site location map, emergency plan and training program for their employees. These plans are to be submitted electronically to the California Environmental Reporting System (CERS). The local CUPA agency may be contacted for assistance with preparation of Business Plans. The CUPA will verify this information and provide it to "local emergency responders such as firefighters, health officials, planners, public safety officers, health care providers, regulatory agencies and other interested" parties. This information is prepared in response to federal community right-to-know laws (CalOES 2016a).

C.2.12.2 California Accidental Release Prevention Program

The CalARP program was developed to assist with prevention of harmful substances releases which could seriously harm the public and/or the environment. Businesses that handle certain quantities of regulated substances

are required to prepare a Risk Management Plan (RMP) that includes an engineering analysis of potential accident scenarios with mitigation measures. The mitigation measures, when implemented, would reduce the accident potential at a business. CalARP is implemented at the local government level (CUPA) who work directly with the regulated business (CalOES 2016b):

C.2.12.3 California Area Plan Program

The Area Plan Program requires CUPAs to prepare a plan utilizing information from CalARP and HMBP. The Area Plan includes emergency response procedures to minimize impacts from a hazardous material release or threatened release. Provisions for multi-agency coordination and notification during emergency responses are also to be addressed in the Area Plan (CalOES 2016c).

C.2.13 California Environmental Quality Act Guidelines

On March 18, 2010, the California Natural Resources Agency adopted amendments to the CEQA Guidelines to include provisions for evaluating the significance of GHG emissions. The amended guidelines give the Lead Agency leeway in determining whether GHG emissions should be evaluated quantitatively or qualitatively, but requires that the following factors be considered when assessing the significance of impacts from GHG emissions (§15064.4):

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the Lead Agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The amended CEQA Guidelines also suggest measures to mitigate GHG emissions, including implementing project features to reduce emissions, obtaining carbon offsets to reduce, or sequestering GHG.

The CEQA does not consider economic or social changes resulting from a project as adverse effects on the environment. If a physical change in the environment is caused by economic or social effects, the physical change may be regarded as an adverse effect. Specifically, under CEQA guidelines (Section 15358[b]), an EIR must analyze impacts “related to physical changes” in the environment. CEQA guidelines Section 15131(a) states that “economic or social effects of a project shall not be treated as significant effects on the environment” unless the economic effects result in physical effects.

The guidelines also say that “An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by economic or social changes. The intermediate economic or social changes caused need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis should be on the physical changes.”

In other words, the economic or social effect of a project may be used to determine the significance of physical changes caused by the project. However, analyses of other environmental resources in this document rely on resource specific tools or qualitative discussions to determine environmental effects. Therefore, economic effects are not needed to judge the significance of changes to other environmental resources.

Physical effects of the project alternatives are evaluated separately and do not require economic analysis; therefore, this section does not provide a CEQA analysis.

CEQA, as codified at PRC Section 21000 et seq., requires lead agencies to determine if a proposed project would have a significant impact on archaeological resources. As defined in PRC Section 21083.2, a “unique” archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type;
- Is directly associated with a scientifically recognized important prehistoric or historic period event or person.

In addition, CEQA *Guidelines* define a historical resource as (1) a resource in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency’s determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological resource constitutes a historical resource, the provisions of PRC Section 21084.1 and CEQA

Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA *Guidelines* criteria for a historical resource, then the site is to be treated in accordance with the provisions of PRC Section 21083 regarding unique archaeological resources. The CEQA *Guidelines* note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of a project on that resource shall not be considered a significant impact on the environment (CEQA *Guidelines* Section 15064.5[c][4]).

Pursuant to CEQA, a proposed project would be considered to have a significant impact on the environment if it would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
4. Disturb any human remains, including those interred outside of formal cemeteries.

On Federal lands, Native American human remains are subject to NAGPRA and its implementing regulations (43 CFR Part 10). On non-Federal lands, human remains, including those interred outside formal cemeteries, are protected under several State laws, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. Health and Safety Code Section 7050.5 establishes intentional disturbance, mutilation or removal of interred human remains as a misdemeanor. It also requires that upon the discovery of human remains outside of a dedicated cemetery, further excavation or disturbance of that discovery must cease until a county coroner makes a report. It requires the county coroner to contact the Native American Heritage Commission within 24 hours if the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the remains to be those of a Native American.

C.2.14 California Executive Order S-3-05

On June 1, 2005, former California Governor Arnold Schwarzenegger signed EO S-3-05. This EO established the following GHG emission reduction targets for California:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The order also requires the Secretary of the CalEPA to report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets, commencing in January 2006.

California GHG emissions were estimated to be 446.06 million tonnes (metric tons) of carbon dioxide equivalent (CO₂e) in 2010, compared to 467.19 million tonnes of CO₂e in 2000 (CARB 2017b). The GHG emissions inventory indicates that emissions decreased by over 21 million tonnes of CO₂e over the decade, representing a 4 percent decrease in statewide emissions. As a result, the State was successful in meeting the first milestone of S-3-05.

C.2.15 California Executive Order B-30-15 and Senate Bill 32

California Governor Edmund G. Brown issued EO B-30-15 to reduce California GHG emissions to 40 percent below 1990 levels by 2030. The order aligns California's GHG reduction targets with the United Nations Climate Change Conference in Paris. In 2016, SB 32 codified the EO B-30-15 target and directed State regulatory agencies to develop rules and regulations to meet the 2030 State target.

C.2.16 California Fish and Game Code Section 1600, Streambed Alterations

Section 1600 et seq. of the California Fish and Game Code, as administered by CDFW, mandates that "it is unlawful for any person to substantively divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." Streambed alteration must be permitted by CDFW through a Streambed Alteration Agreement. CDFW defines streambeds as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life" and lakes as "natural lakes and man-made reservoirs." CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses, and can extend to habitats adjacent to watercourses, including flood plains. Wetlands near watercourses would also be considered habitats adjacent to watercourses". Several of the proposed alternatives may need to submit a Lake and Streambed Alteration Agreement application for construction actions disturbing the bed and bank of rivers or reservoirs.

C.2.17 California Fish and Game Code Sections 3500 - 3705, Migratory Bird Protection

Sections 3500 through 3705 of the California Fish and Game Code regulate the taking of migratory birds and their nests. These codes prohibit the taking of nesting birds, their nests, eggs, or any portion thereof during the nesting season. Typically, the breeding/nesting season is from March 1 through August 30. Depending on each year's seasonal factors, the breeding season can start earlier

and/or end later. Several species of migratory birds are known to occur in the area of analysis.

C.2.18 California General Plan Guidelines

The State's *General Plan Guidelines* recommend that local governments “analyze and quantify’ noise levels and the extent of noise exposure through actual measurement and the use of noise modeling.” In addition to other requirements, the guidelines state that “technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that ‘minimizes the exposure of community residents to excessive noise’” (California Governor's Office of Planning and Research [OPR] 2003).

As part of the county-level planning process, analysis of existing conditions and community tolerance for noise are used to dictate the normally acceptable community noise exposure. Measured in dBA, a normally acceptable community noise exposure is used by the State to signify satisfactory land use in relation to noise exposure. Other terms used by the State to analyze community noise exposure are:

- **Normally Acceptable** - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- **Conditionally Acceptable** - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- **Normally Unacceptable** - New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- **Clearly Unacceptable** - New construction or development should generally not be undertaken.

Table C-6 displays land use categories and community noise exposure levels.

Table C-6. Noise Compatible Land Use Planning

Land Use	Normally Acceptable L _{dn} or CNEL (dBA) ¹	Conditionally Acceptable L _{dn} or CNEL (dBA) ¹	Normally Unacceptable L _{dn} or CNEL (dBA) ¹	Clearly Unacceptable L _{dn} or CNEL (dBA) ¹
Residential – Low Density Single Family, Duplex, Mobile Homes	50-60	55-70	70-75	75+
Residential – Multi Family	50-65	60-70	70-75	75+
Transient Lodging – Motels, Hotels	50-65	60-70	70-80	80+
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-70	60-70	70-80	80+
Auditoriums, Concert Halls, Amphitheaters	N/A	50-70	N/A	65+
Sports Arena, Outdoor Spectator Sports	N/A	50-75	N/A	70+
Playgrounds, Neighborhood Parks	50-70	N/A	67-75	72+
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	N/A	70-80	80+
Office Buildings, Business Commercial and Professional	50-70	67-77	75+	N/A
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	75+	N/A

Source: OPR 2003.

Note:

¹ Ranges in the community noise exposure levels (and any subsequent overlaps in the different categories) reflect the differing noise goals of a community, the community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution (OPR 2003).

Key:

CNEL = Community Noise Equivalent Level

dBA = A-weighted decibel scale

L_{dn} = day-night average level

N/A = Not Applicable

C.2.19 California Government Code 65040.12

California law defines environmental justice as the “fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies,” in Government Code Section 65040.12(e). Section 65040.12(a) designates the Governor’s Office of Planning and Research (OPR) as the coordinating agency in State government for environmental justice programs and requires OPR to develop guidelines for incorporating environmental justice into general plans (7 California Government Code 65040.12). Environmental Justice analysis is not required in CEQA documents.

C.2.20 California Occupational Safety and Health Administration Standards

The California Occupational Safety and Health Administration (CalOSHA) enforces laws and regulations related to the safety and health of workers in the workplace. Laws and regulations enforced by CalOSHA include regulations related to construction and handling of carcinogens and asbestos (CalOSHA 2016).

C.2.21 California Porter-Cologne Water Quality Control Act

The California Porter-Cologne Water Quality Act (Porter-Cologne Act) was enacted in 1969 and established the SWRCB. The Porter-Cologne Act defines water quality objectives as the limits or levels of water constituents that are established for reasonable protection of beneficial uses. Unlike the CWA, the Porter-Cologne Act applies to both surface and groundwater. The Porter-Cologne Act requires that each of nine semi-autonomous RWQCB establish water quality objectives, while acknowledging that water quality may be changed to some degree without unreasonably affecting beneficial uses. Beneficial uses, together with the corresponding water quality objectives, are defined as standards, per Federal CWA regulations. Therefore, the regional plans provide the regulatory framework for meeting State and Federal requirements for water quality control. Changes in water quality are only allowed if the change is consistent with the most restrictive beneficial use designation identified by the State, does not unreasonably affect the present or anticipated beneficial uses, and does not result in water quality less than that prescribed in the water quality control plans (WQCP) (SWRCB 2016a).

A State of California General Permit for Discharges of Stormwater Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ (as amended in 2010 and 2012) will be required prior to any ground disturbance that is greater than one acre or is part of a common plan of development greater than one acre. A NOI and SWPPP must be developed and electronically submitted to the Storm Water Multiple Application and Report Tracking System (SMARTS), an online database maintained by the SWRCB. A Qualified SWPPP Developer (QSD) must prepare the SWPPP. The SWPPP, other permit-required documents, and monitoring data must be maintained on the construction site. A Qualified SWPPP Practitioner (QSP) must implement the SWPPP during construction including installation, inspection, and maintenance of BMPs required by the General Permit.

The General Permit requires dischargers to determine the relative risk levels at each construction site. The risk factors are based on the potential for sedimentation and impacts to downstream receiving waters.

Based on the site's risk level, the SWPPP must list BMPs the discharger will use to protect stormwater runoff as well as the placement of those BMPs. These measures may include but would not be limited to: revegetation, silt fences,

turbidity fences, mulching of unstabilized areas, dewatering structures, stormwater drainage system and construction fencing. The SWPPP will require a visual monitoring program; a chemical monitoring program for the “non-visual” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. This monitoring program will assess compliance with NALs appropriate to the project. The SWPPP should also contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. At higher risk sites, REAPs must be developed ensure that active construction sites have adequate erosion and sediment controls implemented prior to forecasted storm events.

1995 Bay Delta Water Quality Control Plan The 1995 Bay Delta Water Quality Control Plan establishes water quality control measures which contribute to the protection of beneficial uses in the Bay-Delta Estuary. The SWRCB imitated a water rights proceeding following adoption of the 1995 Bay Delta Water Quality Control Plan. The water rights address the water supply-related objectives in the plan through the amendment of water rights under the authority of the SWRCB.

WQCPs are adopted and amended by nine regional water boards under a structured process involving full public participation and State environmental review. WQCPs and amendments thereto do not become effective until approved by the SWRCB. Regulatory provisions must be approved by the Office of Administrative Law. Adoption or revision of surface water standards is subject to the approval of the USEPA.

C.2.22 California Register of Historical Resources

The CRHR is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1[a]). Criteria for CRHR eligibility are based on NRHP criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for or listed in the NRHP.

To be eligible for the CRHR, or to be deemed a “historical resource,” a prehistoric or historic period cultural resource must be important at the local, State, and/or Federal level under one or more of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

2. It is associated with the lives of persons important in our past;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. It has yielded, or is likely to yield, information important in prehistory or history.

For a cultural resource to be eligible for the CRHR, it must also retain enough of its character or appearance (i.e., integrity) to be recognizable as a historical resource and to convey the reason for its significance. A historical resource that does not retain sufficient integrity to meet NRHP criteria may still be eligible for listing in the CRHR.

The CRHR consists of resources that are listed automatically as well as those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed in the NRHP and those formally determined to be eligible for the NRHP;
- California Historical Landmarks (CHL) No. 770 onward;
- California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Resources Commission for inclusion in the CRHR.

Other resources that may be nominated to the CRHR include the following:

- Historical resources with a significance rating of Category 3 through 5 (i.e., properties identified as eligible for listing in the NRHP, the CRHR, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as a historic preservation overlay zone.

C.2.23 California Safe Drinking Water Act

The California SDWA improves upon the minimum requirements of the Federal SDWA. Under the California SDWA (Chapter 7 of the California Health and Safety Code), the CDPH, Division of Drinking Water and Environmental Management has authority to regulate public water systems, and permit water

treatment devices. Water Supply Permits are required when projects will create new drinking water storage facilities or drinking water treatment operations. An amendment to an existing domestic water supply permit is necessary before new water treatment technologies are installed. The CDPH, Drinking Water Program staff, as a part of the Water Supply Permit process, reviews the Final EIR and prepares California Environmental Quality Act (CEQA) findings and conditions as required by California Code of Regulations, Title 14, Section 15091 and 15093.

C.2.24 California Senate Bill 32

In 2016, Senate Bill (SB) 32 codified the EO B-30-15 target of 40 percent reduction below 1990 levels by 2030 and directed State regulatory agencies to develop rules and regulations to meet the 2030 State target.

In November 2017, CARB finalized *California's 2017 Climate Change Scoping Plan* to describe potential policies that could be implemented to achieve the 2030 target established by EO B-30-15 (CARB 2017c). The scoping plan indicates that the annual 2030 statewide target emissions level for California is 260 MMTCO₂e.

C.2.25 California State Parks Guidelines

The California State Parks system does not have regulations regarding noise impacts on campgrounds. For CEQA purposes, the park system defines significant adverse noise impacts as an increase above background that would be clearly discernible and objectionable to park users (CDPR 2006).

C.2.26 California Water Code

The California Water Code establishes state policy, laws, statutes, and definitions for water rights. The Water Code established the SWRCB, delegating adjudicatory and regulatory functions of the state to the SWRCB in the field of water resources. Regulations pertaining to water law are found in Title 23, Sections 640 to 1024. After the enactment of the State Water Commission Act in 1914, the state required any person or agency seeking to use surface water, without an existing riparian right, to apply for and receive approval for such use from the SWRCB. Water rights permits granted by the SWRCB include detailed descriptions of the amounts, conditions, and construction timetables under which the proposed water project must comply. Prior to permit issuance, the SWRCB must take into account all prior rights and the availability of water in the basin. The SWRCB must also consider the flows needed to preserve instream uses such as recreation and fish and wildlife habitat. The SWRCB may impose additional conditions to ensure that these criteria are satisfied and it may use its continuing authority to enforce and revise the conditions of water right permits over time. The SWRCB is also

empowered to revoke a permit or issue cease and desist orders if conditions of the permit are not being met.

Exchanges between CVP and SWP water contractors as a component of the San Luis Reservoir Expansion Alternative would require a change in places of use specified in DWR and Reclamation water right permits. To obtain a change in place of use, DWR and Reclamation would need to petition the SWRCB for said change. Prior to approving these petitions, the SWRCB must find that the change would not cause injury to any legal user of the water involved or result in harm to fish or wildlife. Other water right holders and the public would have an opportunity to object to the proposed change by filing a protest with the SWRCB. If a protest cannot be resolved, the SWRCB can hold a hearing on the petition and would either grant or refuse permission to make the change. Because the SWRCB has discretion to approve the requested petition, it must comply with the CEQA.

Similar to the San Luis Reservoir Expansion Alternative, the Pacheco Reservoir Expansion Alternative would require SCVWD to obtain a new water right from the SWRCB. SCVWD would submit a combination application/petition from the SWRCB for the proposed new structures, and a new water right and change in use. The change in use for Pacheco Reservoir will include adding fish preservation and enhancement.

C.2.26.1 Water Code (Section §10750) or Assembly Bill 3030

AB 3030, commonly referred to as the Groundwater Management Act permits local agencies to develop groundwater management plans (GMPs). Subsequent legislation has further amended the Water Code to make the adoption of a management program mandatory if an agency is to receive public funding for groundwater projects, creating an incentive for the development and implementation of plans. Section 6.1.2.3, Local Regulation, provides more detail on AB 3030.

C.2.26.2 Water Code (Section §10753.7) or Senate Bill 1938

SB 1938, requires local agencies seeking State funds for groundwater construction or groundwater quality projects to have the following: (1) a developed and implemented GMP that includes basin management objectives⁴ (BMOs) and addresses the monitoring and management of groundwater levels, groundwater quality degradation, inelastic land subsidence, and surface water/groundwater interaction; (2) a plan addressing cooperation and working relationships with other public entities; (3) a map showing the groundwater subbasin the project is in, neighboring local agencies, and the area subject to the GMP; (4) protocols for the monitoring of groundwater levels, groundwater quality, inelastic land subsidence, and groundwater/surface water interaction;

⁴ BMOs are management tools that define the acceptable range of groundwater levels, groundwater quality, and inelastic land subsidence that can occur in a local area without causing significant adverse impacts.

and (5) GMPs with the components listed above for local agencies outside the groundwater subbasins delineated by Bulletin 118 (DWR 2003).

C.2.26.3 Water Code (Section 10920-10936 and 12924) or Senate Bill X7 6

SB X7 6, established a voluntary statewide groundwater monitoring program and requires that groundwater data collected be made readily available to the public. The bill requires DWR to: (1) develop a statewide groundwater level monitoring program to track seasonal and long-term trends in groundwater elevation; (2) conduct an investigation of the state's groundwater basins delineated by Bulletin 118 and report its findings to the Governor and Legislature no later than January 1, 2012 and thereafter in years ending in five or zero; and (3) work cooperatively with local Monitoring Entities to regularly and systematically monitor groundwater elevation to demonstrate seasonal and long-term trends. AB 1152, Amendment to Water Code Sections 10927, 10932 and 10933, allows local Monitoring Entities to propose alternate monitoring techniques for basins meeting certain conditions and requires submittal of a monitoring plan to DWR for evaluation. Santa Clara Valley Water District (SCVWD) is the designated monitoring entity for the Santa Clara Valley and Llagas Area subbasin (DWR 2013).

C.2.26.4 Water Code (Section 10927, 10933, 12924, 10750.1 and 10720) or Senate Bill 1168 (Sustainable Groundwater Management Act)

SB 1168, the Sustainable Groundwater Management Act (SGMA), requires the establishment of Groundwater Sustainability Agencies (GSA) and adoption of Groundwater Sustainability Plans (GSP). GSAs must be formed by June 30, 2017. GSAs are new entities that consist of local agency(ies) and include new authority to: 1) investigate and determine the sustainable yield of a groundwater basin; 2) regulate groundwater extractions; 3) impose fees for groundwater management; 4) require registration of groundwater extraction facilities; 5) require groundwater extraction facilities to use flow measurement devices; and 6) enforce the terms of a GSP.

Additionally, this bill required groundwater basins to be prioritized as high-, medium-, low- or very low- with respect to groundwater conditions, adverse impacts on local habitat and adverse impacts on local stream flow no later than January 31, 2015. DWR has determined that the initial basin prioritization developed in June 2014 will be the prioritization adopted under this legislation. DWR has identified and finalized 21 basins/subbasins with critical overdraft conditions as of January 2016.

GSPs for groundwater basins designated by DWR as high- and medium-priority with critical overdraft conditions (per SB X7 6) are required to be developed by January 31, 2020. GSPs for the remaining high- and medium-priority groundwater basins are to be developed by January 31, 2022. GSPs are encouraged to be developed for groundwater basins prioritized as low- or very

low-priority (Pavley 2014a). All high- and medium-priority basins must achieve sustainability within 20 years of adopting a GSP.

As required by the SGMA, in 2016, DWR adopted GSP emergency regulations. (23 Cal. Code Regs. Sections 350 et seq.). In January of 2017, DWR completed, as required by the SGMA, a draft report on the water available for groundwater replenishment in the state. This report was developed in coordination with SGMA advisory groups and stakeholders (DWR 2017a). Also, as required by SGMA, in January 2017 DWR published on its web site best management practices for the sustainable management of groundwater (DWR 2017b).

C.2.26.5 Water Code (Section 10729, 10730, 10732, 10733 and 10735) or Assembly Bill 1739

AB 1739 establishes the following: (1) provides the specific authorities to a GSA (as defined by SB 1168); (2) requires DWR to publish best management practices for the sustainable management of groundwater by January 1, 2017; and (3) requires DWR to estimate and report the amount of water available for groundwater replenishment by December 31, 2016. The bill authorizes DWR to approve and periodically review all GSPs (Dickinson 2014).

The bill authorizes the SWRCB to: (1) conduct inspections and obtain an inspection warrant; (2) designate a groundwater basin as a probationary groundwater basin; (3) develop interim plans for probationary groundwater basins in consultation with DWR if the local agency fails to remedy a deficiency resulting in the designation of probationary; and (4) issue cease and desist orders or violations of restrictions, limitations, orders, or regulations issued under AB 1739 (Dickinson 2014).

C.2.26.6 Water Code (Section 10735.2 and 10735.8) or Senate Bill 1319

SB 1319 authorizes the SWRCB to designate high- and medium-priority basins (defined by SB 1168) as a probationary basin after January 31, 2025. This bill allows the SWRCB to develop interim management plans that may override a local agency. However, if the appointed GSA can demonstrate compliance with sustainability goals for the basin, then the SWRCB has to exclude the groundwater basin or a portion of the groundwater basin from probationary status (Pavley 2014b).

Per SB 13 the local agency or GSA has a 90 to 180 day window to remedy certain deficiencies that caused the SWRCB to designate a basin as probationary. The SWRCB could develop an interim plan for certain probationary basins one year after the designation (Pavley 2015).

C.2.26.7 Water Code (Section 10722.2) or Basin Boundary Emergency Regulation

SB 1168 established a procedure for local agencies to request adjustment of basin boundaries identified in Bulletin 118. Boundary modification can be requested based on geologic or hydrologic criteria (scientific modification) or to promote sustainable groundwater management (jurisdictional modification). The Basin Boundary Emergency Regulation specifies the information a local agency is required to provide for the requested boundary adjustment and the procedure for the modification request and public input (DWR 2015).

C.2.26.8 Water Code (Section 10722.4 and 10730) or AB 939

AB 939 authorizes a GSA to impose fees to fund the GSP and requires the GSA to hold at least one public meeting prior to imposing the fee or increasing the same. The GSA is required to make the data upon which the proposed fee is based available to the public at least 10 days prior to the public meeting (Salas 2015).

C.2.26.9 Water Code (Section 10540, 10721, 10727.4, 10727.8, 10733.4, 10726.5 and 10732.2) or Assembly Bill 617

AB 617 requires measures addressing in-lieu use to be included in the groundwater sustainability plan. This bill also requires groundwater sustainability planning to be incorporated into the integrated regional water management plan (Perea 2015).

C.2.26.10 Water Code Section 13240, Regional Water Quality Control Plans

The California Water Code (Section 13240) requires the preparation and adoption of WQCPs (Basin Plans), and the Federal CWA (Section 303) supports this requirement. According to Section 13050 of the California Water Code, Basin Plans consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected, water quality objectives to protect those uses, and an implementation program needed for achieving the objectives. State law also requires that Basin Plans conform to the policies set forth in the Water Code, beginning with Section 13000, and any State policy for water quality control. The Basin Plans are regulatory references for meeting the State and Federal requirements for water quality control (40 Code Federal Regulations 131.20). One significant difference between the State and Federal programs is that California's basin plans also establish standards for groundwater in addition to surface water (Central Valley RWQCB 1998).

Basin Plans complement other WQCPs adopted by the SWRCB, such as the WQCP for Temperature Control and Ocean Waters. The SWRCB and the regional water boards maintain each Basin Plan in an updated and readily available edition that reflects the current water quality control programs.

Several different regional WQCPs govern water bodies within the SLLPIP area of analysis.

- The *Central Valley Region Basin Plan* covers the drainage areas of the entire Sacramento and San Joaquin river basins, involving an area bound by the crests of the Sierra Nevada on the east and the Coast Range and Klamath Mountains on the west. The area covered in this WQCP extends some 400 miles, from the California – Oregon border to the headwaters of the San Joaquin River.
- The *San Francisco Bay Region Basin Plan* covers all or major portions of Alameda, Contra Costa, Marin, Napa, San Mateo, San Francisco, Santa Clara, Solano, and Sonoma Counties.
- *San Francisco Bay/Sacramento-San Joaquin Delta Estuary Plan* establishes water quality objectives for water bodies within the region in order to protect beneficial uses. The WQCP includes beneficial uses to be protected, water quality objectives, and a program to help achieve the water quality objectives. This plan supplements other water quality control plans, by the SWRCB and RWQCBs, relevant to the Bay-Delta Estuary watershed. These other plans and policies establish water quality standards and requirements for parameters such as toxic chemicals, bacterial contamination, and other factors which have the potential to adversely affect beneficial uses or cause nuisance conditions (SWRCB 2006).

State Water Resources Control Board Decision 1641 SWRCB Decision-1641 presents the current water right requirements to implement the Delta flow-dependent objectives of WQCPs through the SWRCBs water rights authority under the water code. In SWRCB Decision-1641, the SWRCB assigned responsibilities to Reclamation and DWR for meeting these requirements. These responsibilities require that the CVP and the SWP be operated to protect water quality, and that DWR and/or Reclamation will ensure that the flow dependent water quality objectives are met in the Delta (SWRCB 1999).

C.2.27 Hazardous Waste Control Act

The Hazardous Waste Control Act (HWCA) was passed in 1972 by the State Legislature. The Hazardous Waste Control Law (Health and Safety Code sections 25100 et seq.) mandates regulatory standards for the generation, handling, processing, storage, transportation, and disposal of hazardous wastes through a “cradle to grave” system. The California DTSC and local CUPAs are responsible for administration of the California Hazardous Waste Control Program (Brown 2007).

C.2.28 Noise Element Guidelines (Health and Safety Code §46050.1)

The State of California provides guidance for the preparation of general plans and noise ordinances. In 1976, the State Department of Health Services (now the Department of Public Health) issued *Noise Element Guidelines* (Health and Safety Code §46050.1). In 1977, the State Office of Noise Control (ONC) published a model noise ordinance and mandated that each county develop a noise element as part of its general plan (Section 65203[f] of the California Government Code). The purpose of this element is to identify and appraise noise problems in the community. The ONC's model ordinance recommends limits on temporary construction noise levels and operational noise levels in residential, commercial, and industrial areas.

C.2.29 Seismic Hazards Mapping Act

The 1990 Seismic Hazards Mapping Act (PRC Section 2690-2699.6) was enacted to minimize loss of life and property from strong ground shaking, liquefaction, landslides, or other ground failures as a result of earthquakes. The Act requires the California Geological Survey (CGS) to identify and map areas with the potential for liquefaction, landslides, or ground shaking. These maps are used by cities and counties in their land use permitting process and to adequately prepare the safety element of their general plans (CGS 1991). Permits for development projects are not issued until geologic investigations have been completed and mitigation has been developed to address any seismic hazard issues.

C.2.30 State Scenic Highways

California's Scenic Highway Program was created by the Legislature in 1963. Applicable State regulations protecting visual resources stem from the protection of State scenic highways running through or near the project area. There is one officially designated state scenic highway, State Route (SR) 152, in the area of analysis (California Department of Transportation [Caltrans] 2011). Caltrans has full control and possession of all State highways, and the Scenic Highway Program is under their stewardship as well. Scenic highway legislation establishes the State's responsibility to protect and enhance California's scenic beauty by identifying portions of the State highway system and adjacent scenic corridors, which require special conservation treatment. The legislation also assigns responsibility for regulating land use and development along scenic highways to the appropriate local governmental agencies (Caltrans 2008).

C.2.31 State Water Resource Control Board, Hazardous Waste Management

The SWRCB is responsible for several programs related to cleanup and management of hazardous waste sites in California including: the Site Cleanup Program, UST Program, Department of Defense Program, and Land Disposal

(SWRCB 2016b). All of these programs are administered by the San Francisco RWQCB in Santa Clara County north of Morgan Hill, the Central Coast RWQCB in Santa Clara County from Morgan Hill south to the County line, and the Central Valley RWQCB in Merced County (SWRCB 2013). The Cleanup Program regulates unauthorized releases to soils and groundwater, and in some cases surface waters or sediments. The purpose of the UST Program is to “protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks.” The Land Disposal program regulates the discharge of waste “to land for treatment, storage and disposal” (SWRCB 2016b).

C.2.32 Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) of 1975 (PRC, Division 2, Chapter 9, § 2710 et. seq.) addresses surface mining and requires mitigation to reduce adverse impacts to public health, property, and the environment. Through the law, the State Geologist instated mineral land classifications to help identify and protect mineral resources in the State that may be subject to urban development pressures or other “irreversible land uses” which would inhibit mineral extraction (California Department of Conservation [DOC], State Mining and Geology Board [SMGB] and Division of Mines and Geology Nd.). Following classification by the State Geologist, the SMGB designates lands containing mineral deposits as being of regional or statewide significance (California DOC, SMGB and Division of Mines and Geology Nd.).

The SMARA applies to anyone (including a government agency) that disturbs more than one acre or removes more than 1,000 cubic yards of material through surface mining activities, even if activities occur on Federally managed lands (California DOC, Office of Mine Reclamation 2007). Local city and county Lead Agencies are required to develop ordinances for permitting that provide the regulatory framework for mining and reclamation activities. The SMGB reviews Lead Agency ordinances to ensure they comply with SMARA (California DOC, Office of Mine Reclamation 2007).

The SMARA regulations, Article 2, describes areas designated as having regional significance due to the presence of mineral resources. Construction aggregate resources in the South San Francisco Bay Region are identified in Article 2 (§3550.10). There are no areas designated as having regional mineral significance within the area where construction of the alternatives would take place; the closest area is located northeast of Lexington Reservoir, located south of Los Gatos (United States Geological Survey [USGS] 1982). There are no areas in the vicinity of San Luis Reservoir that are mined for aggregate mineral resources or that have been determined to contain minerals of regional, statewide, or multi-community significance (Kohler 2006).

C.2.33 Williamson Act

The Williamson Act, formally known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of promoting the continued use of relevant land for agricultural or related open space use. The Williamson Act empowers local governments to establish “agricultural preserves” consisting of lands devoted to agricultural and other compatible uses. After such preserves are established, the locality may offer the owners of included agricultural land the opportunity to enter into annually renewable contracts that restrict the land to agricultural or open space use for a minimum of 10 years.

The Williamson Act was enhanced in 1998 with the Farmland Security Zones (FSZs; also known as Super Williamson Act lands) provisions. These provisions offer a minimum 20-year contract and must be located in an “agricultural preserve” and designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance.

C.3 Local/Regional Requirements

C.3.1 Bay Area Air Quality Management District (BAAQMD) Plans

The current, USEPA-approved SIPs for each federal nonattainment or maintenance pollutant in the Bay Area Air Quality Management District (BAAQMD) are summarized below:

- CO – Final Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas, approved by USEPA on June 1, 1998 (63 FR 15305)⁵
- O₃ – *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard*, partially approved by the USEPA on May 24, 2004 (69 FR 21717). In its approval, the USEPA also determined that the San Francisco Bay Area O₃ nonattainment area attained the 1-hour O₃ NAAQS.

On April 19, 2017, the BAAQMD adopted the *2017 Clean Air Plan (CAP)*. While not a federal SIP-approved plan, the CAP serves as a control strategy to reduce O₃, particulate matter, toxic air contaminants (TACs), and greenhouse gas emissions in an integrated plan.

On February 8, 2013, the USEPA determined that the San Francisco Bay Area nonattainment area attained the 2006 24-hour PM_{2.5} NAAQS (78 FR 1760).

⁵ On July 22, 2004, CARB approved an update to the SIP with the *2004 Revisions to the Carbon Monoxide Maintenance Plan*, which was subsequently submitted to the USEPA for approval on November 8, 2004. Because the USEPA has not yet approved the update, the 1998 plan is the current SIP-approved plan.

This action suspended the SIP requirements to develop a plan to attain the NAAQS.

C.3.2 California DWR San Luis Division

The San Luis Field Division of the DWR Emergency Action Plan details response plans for emergencies at all DWR reservoirs in the division including San Luis Reservoir. The Emergency Action Plan describes procedures for emergency response to different types of emergencies including hazardous materials spills. The plan includes procedures for the containment and reporting of spills. The plan also details assistance to operators available from outside emergency responders (DWR 2006). Outside emergency responders may include Merced County Fire Department and CalFire.

C.3.3 City of Gilroy Performance Standards

Although no direct construction or operational activities for any alternative would occur in Gilroy, construction worker trips, haul trucks, or vendors associated with the Lower San Felipe Intake may originate in the City of Gilroy.

General provisions of the City of Gilroy Performance Standards (Section 30.41) prohibits objectionable noise levels. The noise ordinance sets maximum permissible outdoor noise levels of 70 dBA (L10) at a residential property line between the hours of 7 a.m. to 10 p.m. Noise producing activities are prohibited between the hours of 10 p.m. and 7 a.m. (City of Gilroy 2013).

The City of Gilroy's general provisions in Section 30.41 also prohibits objectionable vibration levels. There are no quantitative thresholds in the city ordinance (City of Gilroy 2013).

C.3.4 City of Gustine Code of Ordinances

Although no direct construction or operational activities for any alternative would occur in Gustine, construction worker trips, haul trucks, or vendors associated with the Lower San Felipe Intake Alternative may originate in the City of Gustine.

The noise ordinance in Section 7-7-121 of the City of Gustine Code of Ordinances provides standards for the construction of buildings and projects. Construction activities are prohibited within a residential zone or within a radius of 500 feet of a residential zone between the hours of 10 p.m. of one day and 7 a.m. of the next day if they would cause discomfort or annoyance to a resident unless a special permit is obtained (City of Gustine 2012a).

The Zoning and Subdivision Code includes noise standards (Section 4-30-050) for sensitive land uses. Outdoor noise levels at residential, transient lodging, hospitals, and religious properties are limited to 65 dBA L_{dn} . Noise levels at playgrounds and parks are limited to 70 dBA L_{dn} . Construction is limited to

between 7 a.m. and 7 p.m. on Mondays through Fridays, between 8 a.m. and 7 p.m. on Saturdays, and with City approval between 9 a.m. and 5 p.m. on Sundays (City of Gustine 2012b).

Ground vibration that is perceptible without instruments at the property line is prohibited according to the City of Gustine’s Performance Standards of the Zoning and Subdivision Code (Section 4-30-070). Vibrations from temporary construction or demolition activities and motor vehicle operations are exempt (City of Gustine 2012b).

C.3.5 City of Los Banos Municipal Code

Although no direct construction or operational activities for any alternative would occur in Los Banos, construction worker trips, haul trucks, or vendors associated with the Lower San Felipe Intake Alternative and San Luis Reservoir Expansion Alternative may originate in the City of Los Banos.

The City of Los Banos noise ordinance in Title 9, Chapter 3, Article 27 of the Municipal Code sets maximum permissible sound levels by receiving land use. Table C-7 summarizes the City’s exterior noise limits, which are not to be exceeded for more than 30 minutes in any hour. Higher noise levels are allowed for shorter durations (City of Los Banos 1987).

Table C-7. Exterior Noise Limits (City of Los Banos)

Time Period	Residential/Noise Sensitive	Commercial
Daytime (7 a.m. to 10 p.m.)	55 dBA	70 dBA
Nighttime (10 p.m. to 7 a.m.)	45 dBA	70 dBA

Source: City of Los Banos 1987.

Key:

dBA = A-weighted decibel scale

The County also defines allowable interior noise levels for residential dwellings. Between 10 p.m. and 7 a.m. this level is 35 dBA (for no more than five minutes in any hour) and between 7 a.m. and 10 p.m. this level is 45 dBA (for no more than five minutes in any hour). Higher noise levels are allowed for shorter durations (City of Los Banos 1987).

Construction noise is exempt from the noise limits between 7 a.m. and 9 p.m. on Mondays through Fridays and between 8 a.m. and 5 p.m. on Saturdays or Sundays (City of Los Banos 1987).

The City of Los Banos does not have regulations pertaining to vibration levels.

C.3.6 City of San Jose General Plan

C.3.6.1 Visual Resources

The City of San Jose's Envision San Jose 2040 General Plan outlines land use, economic and environmental policies as it relates to the future character and quality of development within the City of San Jose (City of San Jose 2011). Applicable visual resource goals and policies include:

- Use new development within neighborhoods to enhance the public realm, provide for direct and convenient pedestrian access, and visually connect to the surrounding neighborhood. As opportunities arise, improve existing development to meet these objectives (VN-1.7).
- Development should maximize visual and physical access to creeks from the public right-of-way while protecting the natural ecosystem. Consider whether designs could incorporate linear parks along creeks or accommodate them in the future (CD-1.25).
- Promote consistent development patterns along streets, particularly in how buildings relate to the street, to promote a sense of visual order, and to promote attractive streetscapes (CD-4.3).
- Accomplish sound attenuation for development along City streets through the use of setbacks and building design rather than sound attenuation walls. When sound attenuation walls are located adjacent to expressways or freeways, or railroad lines, landscaping, public art, and/or an aesthetically pleasing and visually interesting design should be used to minimize visual impacts (CD-4.11).
- Preserve and enhance the visual access to scenic resources of San Jose and its environs through a system of scenic routes (Goal CD-9).
- Ensure that development within the designated Rural Scenic Corridors is designed to preserve and enhance attractive natural and man-made vistas (Policy CD-9.1).
- Design new public and private utility facilities to be safe, aesthetically pleasing, compatible with adjacent uses, and consistent with the Envision General Plan goals and policies for fiscal sustainability, environmental leadership, an innovative economy, and quality neighborhoods (IN-1.9).
- Condition land development and/or purchase property along designated trail and pathway corridors in order to provide sufficient trail right-of-way and to ensure that new development adjacent to the trail and pathways corridors does not compromise safe trail access nor detract from the scenic and aesthetic qualities of the corridor (PR-7.2).

C.3.6.2 Land Use and Agricultural Resources

The City of San Jose *Envision San Jose 2040 General Plan* outlines land use, economic, and environmental policies as it relates to the future character and quality of development within the City of San Jose (City of San Jose 2011).

The SLLPIP alternatives with components located in the City of San Jose fall within the Open Space Parklands and Habitats land use designation. The General Plan identifies these lands as intended for low intensity uses. Lands in this designation are primarily devoted to open space, parks, recreation areas, trails, habitat buffers, nature preserves and other permanent open space areas. The General Plan calls for new development within this designation to be limited to minimize potential environmental and visual impacts and should avoid use of non-native, irrigated vegetation or development of new structures that would alter the environmental and visual quality of native habitat areas (City of San Jose 2011).

C.3.6.3 Cultural Resources

The current General Plan for the City of San Jose (2011) outlines the following goals, policies, and actions related to cultural resources:

Goal Preservation of historically and archaeologically significant structures, sites, districts and artifacts in order to promote a greater sense of historic awareness and community identity and to enhance the quality of urban living.

Policies Policy 1. Because historically or archaeologically significant sites, structures and districts are irreplaceable resources, their preservation should be a key consideration in the development review process.

Policy 2. The City should use the Area of Historic Sensitivity overlay and the landmark designation process of the Historical Preservation Ordinance to promote and enhance the preservation of historically or architecturally significant sites and structures.

Policy 3. An inventory of historically and/or architecturally significant structures should be maintained and periodically updated in order to promote awareness of these community resources.

Policy 4. Areas with a concentration of historically and/or architecturally significant sites or structures should be considered for preservation through the creation of Historic Preservation Districts.

Policy 5. New development in proximity to designated historic landmark structures and sites should be designed to be compatible with the character of the designated historic resource. In particular, development proposals located within the Areas of Historic Sensitivity designation should be reviewed for such design sensitivity.

Policy 6. The City should foster the rehabilitation of individual buildings and districts of historic significance and should utilize a variety of techniques and measures to serve as incentives toward achieving this end. Approaches which should be considered for implementation of this policy include, among others: Discretionary Alternate Use Policy Number 3, permitting flexibility as to the uses allowed in structures of historic or architectural merit; transfer of development rights from designated historic sites; tax relief for designated landmarks and/or districts; alternative building code provisions for the reuse of historic structures; and such financial incentives as grants, loans and/or loan guarantees to assist rehabilitation efforts.

Policy 8. For proposed development sites which have been identified as archaeologically sensitive, the City should require investigation during the planning process in order to determine whether valuable archaeological remains may be affected by the project and should also require that appropriate mitigation measures be incorporated into the project design.

Policy 9. Recognizing that Native American burials may be encountered at unexpected locations, the City should impose a requirement on all development permits and tentative subdivision maps that upon discovery of such burials during construction, development activity will cease until professional archaeological examination and reburial in an appropriate manner is accomplished.

Policy 10. Heritage trees should be maintained and protected in a healthy State. The heritage tree list, identifying trees of special significance to the community, should be periodically updated.

C.3.7 City of San Jose Municipal Code

The City of San Jose limits sound pressure levels at the property line exceeding 55 dB in residential areas, 60 dB in commercial areas, and 70 dB in industrial areas (City of San Jose Code of Ordinances Sections 20.30.700, 20.40.600, and 20.50.300). With respect to construction, Section 20.100.450 of the Municipal Code limits hours of construction within 500 feet of a residential unit to Monday through Friday 7 a.m. to 7 p.m. Construction on weekends within 500 feet of a residential unit is not allowed (City of San Jose 2016).

In addition to these requirements, Goal EC-1.7, Community Noise Levels and Land Use Compatibility, of the 2040 *General Plan* requires construction operations within San Jose to use best available noise suppression devices and techniques. Additionally, the City considers significant construction noise impacts to occur if a project located within 500 feet of a residential use or 200 feet of a commercial or office uses would involve substantial noise generating activities continuing for more than 12 months (City of San Jose 2011).

The City's acceptable exterior noise level objective is 60 dBA L_{dn} or less for residential land uses. Conditionally acceptable noise levels fall within 60 to 75 dBA L_{dn} . Unacceptable noise levels are those that are greater than 75 dBA L_{dn} for residential, hotels and motels, and hospitals and residential care land uses (City of San Jose 2011).

Vibration that is perceptible without an instrument at the property line is prohibited in residential, commercial, or industrial zones (City of San Jose Code of Ordinances Sections 20.30.700, 20.40.600, and 20.50.300, 2016).

C.3.8 Merced County Code

The Merced County Code (Section 10.60.030) sets sound level limitations for the county. General limitations state that no sound source should exceed the background sound level at the receiving property line by 10 dBA or more during the daytime hours (7 a.m. to 10 p.m.) and by 5 dBA or more during the nighttime hours (10 p.m. to 7 a.m.). The maximum permissible sound levels for residential property are 65 dBA L_{dn} or 75 dBA L_{max} . The maximum permissible sound levels for property other than residential property are 70 dBA L_{dn} or 80 dBA L_{max} (Merced County 2009).

The County's ordinance exempts construction activities, "provided that all construction in or adjacent to urban areas shall be limited to the daytime hours between 7 a.m. and 6 p.m., and all construction equipment shall be properly muffled and maintained." Operation of construction equipment outside of these daytime hours or at any time on a weekend day or legal holiday is prohibited (Merced County 2009).

Section 18.41.090 of the Merced County Code states that no use shall create any disturbing ground vibration based on typical human reaction beyond the boundaries of the site (Merced County 1977).

C.3.9 Merced County General Plan

C.3.9.1 Water Quality

The *2030 Merced County General Plan - Water Element* (Merced County 2013) sets forth countywide goals and policies applicable to water quality including:

Goal W-2: Protect the quality of surface and groundwater resources to meet the needs of all users.

- Policy: Ensure that land uses and development on or near water resources will not impair the quality or productive capacity of these water resources.

- Policy: Prepare updated development regulations, such as best management practices, that prevent adverse effects on water resources from construction and development activities.
- Policy: Encourage the use of natural channels for drainage and flood control to benefit water quality and other natural resource values.
- Policy: Encourage agriculture and urban practices to comply with the requirements of the RWQCB for irrigated lands and confined animal facilities, which mandate agricultural practices that minimize erosion and the generation of contaminated runoff to ground or surface waters by providing assistance and incentives
- Policy: Monitor and enforce provisions of the USEPA NPDES program to control non-point source water pollution.
- Policy: Coordinate with the SWRCB, RWQCB, and other responsible agencies to ensure that sources of water contamination (including boron, salt, selenium and other trace element concentrations) do not enter agricultural or domestic water supplies, and will be reduced where water quality is already affected.

C.3.9.2 Flood Control

The *2030 Merced County General Plan* (Merced County 2013) offers guidance concerning floodplain management, flood emergency response, funding development to finance construction of flood control facilities, flood risk consideration when developing within floodplains, flood control design and construction, public awareness programs and adapting infrastructure to accommodate for climate change. The plan directs that certain high occupancy or critical facilities, such as schools or hospitals should be discouraged in floodplains while open space uses are logical uses of flood prone areas. Policy 4-HS-2.9 in the Health and Safety Element of the General Plan states that “within areas subject to 100-year and 200-year frequency floods, all public utilities and facilities, such as roads, structures, wastewater treatment plants, gas, electrical and water systems, should be located and constructed to minimize or eliminate flood damage to the facilities.”

C.3.9.3 Geology, Seismicity, and Soils

The *2030 Merced County General Plan – Health and Safety (HS) Element* (Merced County 2013) establishes the following goal and policies related to seismic and geologic hazards:

- Goal HS-1: Minimize the loss of life, injury, and property damage of County residents due to seismic and geologic hazards.

- Policy HS-1.1: Require that all new habitable structures be located and designed in compliance with the Alquist-Priolo Special Studies Zone Act and related State earthquake legislation.
- Policy HS-1.2: Support efforts to obtain financial assistance from Federal and State agencies in order to implement corrective seismic safety measures required for existing County buildings and structures.
- Policy HS-1.3: Require all new structures located within dam inundation areas to conform to standards of dam safety as required by the State Division of Safety of Dams.
- Policy HS-1.4: Require earthquake resistant design for proposed critical structures such as hospitals, fire stations, emergency communication centers, private schools, high occupancy buildings, bridges and freeway overpasses, and dams that are subject to County permitting requirements.
- Policy HS-1.5: Encourage educational programs to inform the public of earthquake dangers in Merced County.
- Policy HS-1.6: Prohibit habitable structures on areas of unconsolidated landslide debris or in areas vulnerable to landslides.
- Policy HS-1.7: Discourage construction and grading on slopes in excess of 30 percent.
- Policy HS-1.8: Require that the provisions of the International Building Code be used to regulate projects subject to hazards from slope instability.
- Policy HS-1.9: Require and enforce all standards contained in the International Building Code related to construction on unstable soils.

The 2030 Merced County General Plan – Natural Resources (NR) Element addresses goals, objectives, and policies related to soil and mineral resources in the county (Merced County 2013). Applicable policies include:

- Goal NR-3: Facilitate orderly development and extraction of mineral resources while preserving open space, natural resources, and soil resources and avoiding or mitigating significant adverse impacts.
 - Policy NR-3.1: Protect soil resources from erosion, contamination, and other effects that substantially reduce their value or lead to the creation of hazards.

- Policy NR-3.2: Require minimal disturbance of vegetation during construction to improve soil stability, reduce erosion, and improve stormwater quality.
- Policy NR-3.3: Encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. This shall include promoting and coordinating the efforts of University of California Cooperative Extension, various Resource Conservation Districts, and other similar agencies and organizations.

The Merced County Code Title 16, Chapter 16.16 requires construction projects within the county's jurisdiction to follow the International Building Code standards and California State Amendments to the code (Ord. 1856 § 2, 2009). Among other important specifications, the International Building Code includes requirements and standards for geotechnical investigations (Section 1803); excavation, grading, and fill (Section 1804); structural design (Chapter 16); and, earthquake loads (Section 1613).

The Merced County Public Works Department regulates building and building safety within the unincorporated county. The Building and Safety Division and the Planning and Community Development Department are responsible for assessing proposed building projects and issuing building permits (Merced County 2011). Merced County does not have a grading ordinance and does not require permits for proposed grading.

Chapter 18.43 establishes the county's surface mining and reclamation ordinance. Merced's ordinance was certified in 1997. The purpose of the county's ordinance is to regulate surface mining and reclamation operations consistent with the county general plan and the SMARA at the State level. The county's SMARA ordinance was certified by the SMGB in 1997.

Chapter 18.41 of the county code sets performance standards to ensure compatibility between land uses by limiting such things as fumes, odor, noise, and dust. Section 030 covers dust mitigation from construction activities including clearing, grading, earth moving and other site preparation activities. The ordinance requires the application of water to prevent dust from leaving the project site.

C.3.9.4 Visual Resources

The *2030 Merced County General Plan* discusses aesthetic resources and their importance to the County's character (Merced County 2013). The following policies are relevant to the protection of visual resources in the project area.

- Scenic Resources: Protect scenic resources and vistas (Goal NR-4).

- **Scenic Resource Preservation:** Promote the preservation of agricultural land, ranch land, and other open space areas as a means of protecting the County's scenic resources (Policy NR-4.1).
- **Special Review Process for Structures Adjacent to Scenic Highways:** Coordinate with Caltrans, during the review of proposed structures and activities located adjacent to State-designated scenic highways, to ensure that scenic vistas and local scenic values are not significantly degraded (Policy NR-4.2).
- **Building Design:** Require that siting and design of buildings protect, improve, and enhance the scenic quality of the built and natural environments and take full advantage of scenic resources through site orientation, building setbacks, preservation of viewsheds, height limits, and the use of appropriate construction materials and exterior modulation (Policy NR-4.3).
- **New Roads:** Consider the surrounding landscape, topography, and existing scenic values when determining the location and construction of new roads (Policy NR-4.4).
- **Light Pollution Reduction:** Require good lighting practices, such as the use of specific light fixtures that reduce the light pollution, minimize light impacts, and preserve views of the night sky (Policy NR-4.5).
- **Preserve, enhance, expand, and manage Merced County's diverse system of regional parks, trails, recreation areas, and natural resources for the enjoyment of present and future residents and park visitors (Goal RCR-1).**
- **Scenic Resource and Public Land Protection:** Encourage the use of regional parks and open space areas as a mechanism to preserve the County's natural scenic beauty and protect land for public purposes (Policy RCR-1.11).

C.3.9.5 Noise and Vibration

The *2030 Merced County General Plan*, which was adopted on December 10, 2013, includes noise standards for new noise-sensitive land uses such as residences, hospitals, and churches that are affected by transportation noise sources, as shown in Table C-8 (Merced County 2013). Table C-9 summarizes the interior and exterior noise level standards for noise-sensitive areas affected by existing non-transportation noise sources.

Table C-8. Noise Standards for New Uses Affected by Traffic, Railroad and Airport Noise in Merced County

New Land Use	Sensitive Outdoor Area ¹ – L _{dn} (dBA)	Sensitive Indoor Area ² – L _{dn} (dBA)
All residential ³	65	45
Transient Lodging ^{3,4}	65	45
Hospitals & Nursing Homes ^{3,4,5}	65	45
Theaters & Auditoriums ⁴	---	35
Churches, Meeting Halls, Schools, Libraries, etc. ⁴	65	40
Office Buildings ⁴	65	45
Commercial Buildings ⁴	---	50
Playgrounds, Parks, etc.	70	---
Industry ⁴	65	50

Source: Merced County 2013.

Notes:

1. Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.
2. Sensitive Interior Areas includes any interior area associated with any given land use at which noise-sensitivity exists and the location at which the County's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.
3. Railroad warning horn usage shall not be included in the computation of L_{dn}.
4. Only the interior noise level standard shall apply if there are no sensitive exterior spaces proposed for these uses.
5. Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

**Table C-9. Non-Transportation Noise Standards
Median (L₅₀) / Maximum (L_{max})¹**

Receiving Land Use	Outdoor Daytime (dBA)	Outdoor Nighttime (dBA)	Interior Day or Night (dBA)
All residential	55 / 75	50 / 70	35 / 55
Transient Lodging ⁴	55 / 75	---	35 / 55
Hospitals & Nursing Homes ^{5,6}	55 / 75	---	35 / 55
Theaters & Auditoriums ⁶	---	---	30 / 50
Churches, Meeting Halls, Schools, Libraries, etc. ⁶	55 / 75	---	35 / 60
Office Buildings ⁶	60 / 75	---	45 / 65
Commercial Buildings ⁶	55 / 75	---	45 / 65
Playgrounds, Parks, etc. ⁶	65 / 75	---	---
Industry ⁶	60 / 80	---	50 / 70

Source: Merced County 2013.

Notes:

1. These standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards in this table, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive Outdoor Areas include primary outdoor activity areas associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.
3. Sensitive Interior Areas includes any interior area associated with any given land use at which noise-sensitivity exists and the location at which the County's interior noise level standards are applied. Examples of sensitive interior spaces include, but are not limited to, all habitable rooms of residential and

transient lodging facilities, hospital rooms, classrooms, library interiors, offices, worship spaces, theaters. Interior noise level standards are applied within noise-sensitive areas of the various land uses with windows and doors in the closed positions.

- ⁴ Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
- ⁵ Since hospitals are often noise-generating uses, the exterior noise level standards are applicable only to clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
- ⁶ The outdoor activity areas of these uses (if any) are not typically used during nighttime hours.
- ⁷ Where median (L_{50}) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards of this table provided the noise source operates for at least 30 minutes. If the source operates less than 30 minutes the maximum noise level standards shown shall apply.

These standards are enforced to protect noise-sensitive land uses in the county and do not pertain to short-term construction noise.

C.3.9.6 Fisheries and Terrestrial Resources

The *2030 Merced County General Plan - Natural Resources Element* (Merced County 2013) sets forth the following goal and policies regarding terrestrial resources:

Goal NR-1: Preserve and protect, through coordination with the public and private sectors, the biological resources of the County.

- Policy NR-1.1: Habitat Protection- Identify areas that have significant long-term habitat and wetland values including riparian corridors, wetlands, grasslands, rivers and waterways, oak woodlands, and vernal pools, and provide information to landowners.
- Policy NR-1.2: Protected Natural Lands- Identify and support methods to increase the acreage of protected natural lands and special habitats, including but not limited to, wetlands, grasslands, and vernal pools, potentially through the use of conservation easements.
- Policy NR-1.3: Forest Protection- Preserve forests, particularly oak woodlands, to protect them from degradation, encroachment, or loss.
- Policy NR-1.4: Important Vegetative Resource Protection- Minimize the removal of vegetative resources which stabilize slopes, reduce surface water runoff, erosion, and sedimentation.
- Policy NR-1.5: Wetland and Riparian Habitat Buffer- Identify wetlands and riparian habitat areas and designate a buffer zone around each area sufficient to protect them from degradation, encroachment, or loss.
- Policy NR-1.6: Terrestrial Wildlife Mobility - Encourage property owners within or adjacent to designated habitat connectivity corridors that have been mapped or otherwise identified by the CDFW or USFWS to install wildlife-friendly fencing, provide roadway undercrossing, or install oversized culverts and bridges to allow movement of terrestrial wildlife.

- Policy NR-1.11: On-Going Habitat Protection and Monitoring- Cooperate with local, State, and Federal agencies to ensure that adequate on-going protection and monitoring occurs adjacent to rare and endangered species habitats or within identified significant wetlands.
- Policy NR-1.12: Wetland Avoidance- Avoid or minimize loss of existing wetland resources by careful placement and construction of any necessary new public utilities and facilities, including roads, railroads, high speed rail, sewage disposal ponds, gas lines, electrical lines, and water/wastewater systems.
- Policy NR-1.13: Wetland Setbacks- Require an appropriate setback, to be determined during the development review process, for developed and agricultural uses from the delineated edges of wetlands.
- Policy NR-1.15: Urban Forest Protection and Expansion- Protect existing trees and encourage the planting of new trees in existing communities. Adopt an Oak Woodland Ordinance that requires trees, larger than a specified diameter, that are removed to accommodate development be replaced at a set ratio.
- Policy NR-1.17: Agency Coordination- Coordinate with private, local, State, and Federal agencies to assist in the protection of biological resources and prevention of degradation, encroachment, or loss of resources managed by these agencies.

C.3.9.7 Land Use and Agricultural Resources

Merced County's 2030 General Plan Land Use Element describes the policies and standards for future land use and agricultural/resource protection for rural and urban land use (Merced County 2013). The Natural Resources Element provides the policy context for open space (Merced County 2013). Titles 16, 17, and 18 of the Merced County Code address regulations related to building and construction, subdivisions, and zoning (Merced County Nd.).

The SLLPIP alternatives with components located in Merced County fall within the Foothill Pasture land use designation. This designation applied to lands in the County that support non-cultivated agricultural practices over larger areas with poor soil quality, limited water availability, and steeper slopes. Specific land use policies included in the General Plan for this designation include:

- Goal LU-2 Preserve, promote, and expand the agricultural industry in Merced County.
 - Policy LU-2.2: Foothill Pasture Designation (RDR) Apply the Foothill Pasture land use designation on agricultural and open space

lands located on the eastern and western edges of the County which are recognized for their value as grazing, cropland, and open space.

- Policy LU-2.3: Land Use Activity Limitations (RDR) Limit allowed land use within Agricultural and Foothill Pasture areas to agricultural crop production, farm support operations, and grazing and open space uses (Merced County 2013).

C.3.9.8 Cultural Resources

The following includes the various goals, policies, actions, programs, implementation strategies, and ordinances that address cultural resources in Merced County. This includes the *2030 Merced County General Plan* (Merced County 2013). Only information considered relevant to the proposed project was included.

Cultural resources in Merced County include archaeological sites (prehistoric and historic) and historic resources. These types of resources include: prehistoric occupations, cemeteries, isolated burials, quarry sites, petroglyph (rock carving) and pictograph (rock painting) sites; historic archaeological sites; and historic structures and landmarks.

Goal 2. Soil, water, mineral, energy, historical, and air resources are properly managed

Objective 2.E. Significant archaeological and cultural resources are recognized and managed.

Policy 21. Projects that effect archaeological sites and artifacts should be carefully managed to avoid damage.

Policy 22. The original architectural character of significant historic structures should be maintained whenever possible.

Policy 23. To discourage looting and vandalism, significant historical and archaeological resources should be subject to limited or controlled public access.

C.3.10 Merced County Office of Environmental Services

Emergency preparedness, coordination and direction of wide-scale disasters and emergencies are provided by the Merced County Office of Environmental Services (OES). The Merced County OES coordinates planning, response, recovery, and mitigation activities with many partners including incorporated and unincorporated cities, special districts, and some private agencies. The Merced County OES and their partner agencies coordinate and maintain Emergency Operations Plans according to the National Incident Management System for the County. Contained within the Merced County Emergency

Operations Plan (2013) is guidance for handling and managing large-scale incidents and disasters including public health threats (Merced County 2016).

C.3.11 Pacheco State Park General Plan

The Pacheco State Park (SP) is owned and managed by CDPR. The CDPR approved the *Pacheco SP General Plan* in 2006; however, the final General Plan has not been published due to necessary changes determined during the final comment period of the Final Environmental Impact Report (EIR) (CDPR 2004).

C.3.12 San Joaquin Valley Air Pollution Control District Plans

The current, USEPA-approved SIPs for each federal nonattainment or maintenance pollutant in the San Joaquin Valley Air Pollution Control District (SJVAPCD) are summarized below:

- O₃ – *2007 Ozone Plan*, approved by USEPA for the 1997 8-hour O₃ NAAQS on April 30, 2012 (77 FR 12652)
- CO – *Final Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas*, approved by USEPA on June 1, 1998 (63 FR 15305)⁶
- PM₁₀ – *2007 PM₁₀ Maintenance Plan and Request for Redesignation*, approved by USEPA on November 12, 2008 (73 FR 66759)
- PM_{2.5} – *2012 PM_{2.5} Plan*, partially approved by USEPA on August 31, 2016 (81 FR 59876). In this approval, the USEPA approved in part and disapproved in part SIP revisions to provide for the attainment of the 2006 24-hour PM_{2.5} NAAQS.
- PM_{2.5} – *2008 PM_{2.5} Plan*, partially approved by USEPA on January 9, 2012 (76 FR 69896). In this approval, the USEPA approved in part and disapproved in part SIP revisions to provide for attainment of the 1997 PM_{2.5} NAAQS.⁷

In addition to the SIP-approved *2007 Ozone Plan*, the SJVAPCD adopted the *2016 Plan for the 2008 8-Hour O₃ Standard* in June 2016, which was subsequently approved by CARB in July 2016. However, the plan is still pending approval by the USEPA.

The SJVAPCD also adopted the *2004 Extreme Ozone Attainment Demonstration Plan* for the revoked 1-hour 1979 O₃ NAAQS in October 2004,

⁶ On July 22, 2004, CARB approved an update to the SIP with the *2004 Revisions to the Carbon Monoxide Maintenance Plan*, which was subsequently submitted to the USEPA for approval on November 8, 2004. Because the USEPA has not yet approved the update, the 1998 plan is the current SIP-approved plan.

⁷ On August 28, 2013, the USEPA proposed to approve the SJVAB 1997 PM_{2.5} Contingency Measures and published an interim-final rule to stay and defer sanctions (78 FR 53113).

but the USEPA did not act on the plan until 2010 (75 FR 10420). Because of litigation the EPA withdrew its plan approval in November 2012 (77 FR 70376). In September 2013, the SJVAPCD consequently adopted the *2013 Plan for the Revoked 1-Hour Ozone Standard*, which was approved by the USEPA on February 25, 2016 (81 FR 19492).

The SJVAPCD has prepared several plans for PM_{2.5} that have not yet been approved by the USEPA. These plans are summarized below:

- List paragraph text – These sentences are here solely to have text. These sentences are here solely to have text.
- Draft *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Plans*
- *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard* (adopted by SJVAPCD in September 2016; pending approval by CARB and USEPA)
- *2015 Plan for the 1997 PM_{2.5} Standard* (adopted by SJVAPCD in April 2015 and by CARB in May 2015; pending approval by USEPA)

C.3.13 Santa Clara County General Plan

C.3.13.1 Water Quality

The *Santa Clara County General Plan - Resource Conservation Chapter* (Santa Clara County 1994) sets forth countywide strategies and policies applicable to water quality including:

Strategy #1: Reduce Non-Point Source Pollution

- Policy: Countywide, compliance should be achieved with the requirements of the NPDES permit for discharges into San Francisco Bay, and to that end, the Countywide Nonpoint Source Pollution Control Program should receive the full support and participation of each member jurisdiction
- Policy: The countywide Stormwater Management Plan should be routinely reviewed and updated as additional information is collected on the effectiveness of prescribed control measures.
- Policy: Efforts to increase public awareness and education concerning nonpoint source pollution control should be encouraged.

Strategy #2: Restore Wetlands, Riparian Areas, and Other Habitats that Improve Bay Water Quality

- Policy: Wetlands restoration for the purpose of enhancing municipal wastewater treatment processes, improving habitat and passive recreational opportunities should be encouraged and developed where cost-effective and practical.

Strategy #3: Prepare and Implement Comprehensive Watershed Management Plans

- Policy: Comprehensive watershed management plans should be developed and implemented through intergovernmental coordination. Water supply watersheds should receive special consideration and additional protection.

C.3.13.2 Flood Control

Santa Clara County's flood protection-related policies focus on the protection of urban development in flood-prone areas; the protection of existing recreation lands from flood protection projects and related hazards; and flood-related natural disaster relief and prevention (Santa Clara County 1994).

C.3.13.3 Geology, Seismicity and Soils

Book A, Part 2, *Resource Conservation and Health and Safety chapters*, of the *Santa Clara County General Plan* establishes the following applicable policies in relation to mineral resources and natural hazards (Santa Clara County 1994):

- **Policy C-CR 44:** Local supplies of mineral resources should be recognized for their importance to the local, regional, and State economy. Countywide strategies for preserving and managing mineral resources include:
 - Ensuring continued availability of mineral resources to meet long-term demand; and,
 - Mitigating environmental impacts of extraction and transportation.
- **Policy C-CR 45:** Current and future demand for mineral resources in Santa Clara County, particularly construction aggregates, should be ensured by the following means:
 - Preserving deposits and access routes.
- **Policy C-CR 46:** Existing sites and access routes for regionally-significant resources should be protected from incompatible land uses and development that would preclude or unnecessarily limit resource availability.”

- **Policy C-HS 28:** Countywide strategies for reducing the threat of natural hazards to life and property should include:
 - Design, locate, and regulate development to avoid or withstand hazards;
 - Reduce the magnitude of the hazard, if feasible; and,
 - Provide public information regarding natural hazards.

Title C, Division C3, Chapter 1 of the county's code describes that the county defers to the 2010 CBSC for its building code regulations.

The Santa Clara County Geologic Ordinance (Division C12, Chapter 4) regulates geologic provisions and establishes minimum requirements for the geologic evaluation of land based on the proposed land uses. It also establishes procedures to enforce these requirements, including rules and regulations for the development of land which is on or adjacent to known hazardous areas, or which has the potential to create or increase the risk of geologic hazard. This chapter fulfills the county's responsibility to comply with State laws regarding geologic hazards including the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act.

Section 4.10.370 of the Santa Clara County Zoning Ordinance (Title C Appendix I Article 4, Chapter 4.10) describes county requirements for surface mining and management plans and county compliance with SMARA. The county's ordinance was most recently certified by the SMGB in 2000.

C.3.13.4 Visual Resources

The Parks and Recreation and Resource Conservation sections of the Rural Unincorporated Areas component of the *Santa Clara County General Plan* discuss the value of scenic resources in the County (Santa Clara County 1994). The following policies and implementation measures are relevant to the portion of the project that would occur within Santa Clara County.

- The natural scenery which exists along many of Santa Clara County's highways should be protected from land uses and other activities which would diminish its aesthetic qualities (Policy R-PR 39).
- Land use should be controlled along scenic roads so as to relate to the location and functions of these roads and should be subject to design review and conditions to assure the scenic quality of the corridor (Policy R-PR 40).
- The visual integrity of the scenic gateways, which include Pacheco Pass, should be protected (Policy R-PR 41).

- New structures should be located where they will not have a negative impact on the scenic quality of the area, and in rural areas should generally be set back at least 100 feet from scenic roads and highways to minimize their visual impact (Policy R-PR 45).
- Activities along scenic highways that are of a substantially unsightly nature, such as equipment storage or maintenance, fuel tanks, refuse storage or processing, should be screened from view (Policy R-PR 47).
- The scenic and aesthetic qualities of both the natural and built environments should be preserved and enhanced for their importance to the overall quality of life for Santa Clara County (Policy R-RC 95).
- The general approach to scenic resource preservation for the rural unincorporated areas consists of the following strategies (Policy R-RC 96):
 - Minimize scenic impacts in rural areas through control of allowable development densities.
 - Limit development impacts on highly significant scenic resources, such as, ridgelines, prominent hillsides, streams, transportation corridors and county entranceways.
- Scenic qualities of the rural areas of Santa Clara County shall be maintained and enhanced through existing land use and development policies. Development compatible with scenic resource conservation should be encouraged (Policy R-RC 97).
- Hillsides, ridgelines, scenic transportation corridors, major county entryways, stream environments, and other areas designated as being of special scenic significance should receive utmost consideration and protection due to their prominence, visibility, and overall contribution to the quality of life in Santa Clara County (Policy R-RC 98).
- Roads, building sites, structures and public facilities shall not be allowed to create major or lasting visible scars on the landscape (Policy R-RC 101).
- Protect the scenic value of the following major County thoroughfares and entranceways through State scenic highway designation, including Pacheco Pass (SR 152 east of Gilroy), Hecker Pass (SR 152 west of Gilroy), and Route 101 (from the San Jose City limits south to the San Benito County border) (Policy R-RC-(i)-36).

C.3.13.5 Noise and Vibration

The Noise Compatibility Standards in the Safety and Noise Chapter of the *Santa Clara County General Plan* (1994) state that an exterior noise environment of 55 dB Ldn or less is considered satisfactory for residential land use, a level between 55 dB and 65 dB Ldn is considered cautionary, and a level greater than 65 dB Ldn is considered critical. For open space land uses, noise levels of 65 dB Ldn or less are considered satisfactory and noise levels between 65 dB and 80 dB Ldn are considered cautionary.

C.3.13.6 Fisheries and Terrestrial Resources

The *Santa Clara County General Plan Resource Conservation Chapter* (Santa Clara County 1994) sets forth countywide strategies and policies applicable to Habitat and Biodiversity, including:

Strategy #2: Protect the Biological Integrity of Critical Habitat Areas

- Policy: Habitat and other resource areas not suitable or intended for urbanization should be excluded from urbanization, and non-urban development which occurs within resource conservation areas should minimize impacts upon habitat and biodiversity.
- Policy: Areas of habitat richest in biodiversity and necessary for preserving threatened or endangered species should be formally designated to receive greatest priority for preservation, including baylands and riparian areas, serpentine areas, and other habitat types of major significance.
- Policy: Land uses permitted in resource conservation areas should not be allowed to degrade the integrity of natural habitat.
- Policy: Linkages and corridors between habitat areas should be provided to allow for migration and otherwise compensate for the effects of habitat fragmentation.

Strategy #3: Encourage Habitat Restoration

- Policy: Restoration of habitats should be encouraged and utilized where feasible, especially in cases where habitat preservation and flood control, water quality, or other objectives can be successfully combined.

Strategy #4: Evaluate the Effectiveness of Environmental Mitigations

- Policy: The status of various threatened and endangered species and the effectiveness of strategies and programs to preserve biodiversity should be monitored and evaluated on an ongoing basis.

- Policy: Specific project mitigations for the purpose of preserving habitat should be monitored for a period of time to assure the likelihood of their effectiveness.

C.3.13.7 Land Use and Agricultural Resources

Santa Clara County's 1995-2010 *General Plan* includes policies designed to regulate land use and development throughout the county (Santa Clara County 1994). The Pacheco Reservoir Expansion Alternative falls within the Ranchlands land use designation. This designation is applied to lands in the County that are predominantly used as ranches in rural unincorporated areas of the county, remote from urbanized areas and generally less accessible than other mountain lands. Grazing lands are included under this designation.

Specific land use policies included in the General Plan for this designation include:

- R-LU 39: The primary use shall be ranching. Other allowable uses shall be: agriculture; low intensity recreational uses; mineral extraction; land in its natural state; hunting; wildlife refuges; very low density residential development; and very low intensity commercial, industrial, or institutional uses, provided that they primarily support ranching activities or the enhancement, protection, study or appreciation of the natural resources of the area
- R-LU 40: General principles governing development and land division in Ranchlands areas shall be as follows:
 - No large ranches shall be allowed to fully divide into small parcels.
 - The function of allowed subdivisions shall be for the following, provided that very little population is added to Ranchlands areas: help ranchers trade land; raise capital in times of need; help settle estates; and provide for family divisions.
 - The right of ranchers to build residences and to divide "Williamson Act" property under the terms of existing Land Conservation contracts is affirmed.
 - There shall be a limit to the number of parcels created within the Ranchlands area.
 - The rural character of the area shall not be changed, and land use decisions shall prevent an influx of people into the Ranchlands area

C.3.13.8 Cultural Resources

The following policies and strategies related to cultural resources are included in the *Santa Clara County General Plan* and are applicable to the proposed project:

In *Santa Clara County General Plan*, defines heritage resources are those particular types of resources, both natural and man-made, which due to their vulnerability or irreplaceable nature deserve special protection if they are to be preserved for current and future generations. The types of resources addressed as heritage resources include: historical sites, structures, and areas; archeological and paleontological sites and artifacts; and historical and specimen trees.

C-RC 49. Cultural heritage resources within Santa Clara County should be preserved, restored wherever possible, and commemorated as appropriate for their scientific, cultural, historic and place values.

C-RC 50. Countywide, the general approach to heritage resource protection should include the following strategies:

1. Inventory and evaluate heritage resources.
2. Prevent or minimize adverse impacts on heritage resources.
3. Restore, enhance, and commemorate resources as appropriate.

C-RC 51. Inventories of heritage resources should be maintained as the basis for local decision-making regarding such resources.

C-RC 52. Prevention of unnecessary losses to heritage resources should be ensured as much as possible through adequate ordinances, regulations, and standard review procedures. Mitigation efforts, such as relocation of the resource, should be employed where feasible when projects will have a significant adverse impact upon heritage resources.

C-RC 53. Cities should balance plans for urban redevelopment with the objectives of heritage resource preservation in such cases where potential conflicting interests may arise. Care should be taken to integrate heritage resources with new development wherever possible.

C-RC 54. Heritage resources should be restored, enhanced, and commemorated as appropriate to the value and significance of the resource.

C-RC 55. Public awareness and appreciation of existing heritage resources and their significance should be enhanced through community organizations, neighborhood associations, the educational system, and governmental programs.

C-RC(i)24. Update inventories and evaluations of heritage resources. Survey resources as necessary to augment existing inventories.

C-RC(i)25. Review administrative procedures and enforcement for effectiveness.

C-RC(i)26. Explore designation of historic districts to preserve character of areas rich in heritage resources.

R-RC 1. Natural and heritage resources shall be protected and conserved for their ecological, functional, economic, aesthetic, and recreational values.

1. Heritage resources shall be preserved to the maximum extent possible or their scientific, cultural, and “sense of place” values.

R-RC 81. Heritage resources within the rural unincorporated areas of Santa Clara County shall be preserved, restored wherever possible, and commemorated as appropriate for their scientific, cultural, historic and place values.

R-RC 85. No heritage resource shall knowingly be allowed to be destroyed or lost through a discretionary action (zoning, subdivision site approval, grading permit, building permit, etc.) of the County of Santa Clara unless:

1. the site or resource has been reviewed by experts and the County Historic Heritage Commission and has been found to be of insignificant value; or
2. there is an overriding public benefit from the project and compensating mitigation to offset the loss is made part of the project.

R-RC 86. Projects in areas found to have heritage resources shall be conditioned and designed to avoid loss or degradation of the resources. Where conflict with the resource is unavoidable, mitigation measures that offset the impact maybe imposed.

R-RC 90. Heritage and old growth trees, particularly redwoods, should not be cut, except in instances where public safety is jeopardized.

C.3.14 Santa Clara County Ordinance Code

C.3.14.1 Noise and Vibration

Santa Clara County sets maximum permissible sound levels by receiving land use. Table C-10 summarizes the County’s exterior noise limits, which are not to be exceeded for more than 30 minutes in any hour. Higher noise levels are allowed for shorter durations (Santa Clara County 2003).

The County also defines allowable interior noise levels for multi-family dwellings. Between 10 p.m. and 7 a.m. this level is 35 dBA (for no more than five minutes in any hour) and between 7 a.m. and 10 p.m. this level is 45 dBA (for no more than five minutes in any hour). Higher noise levels are allowed for shorter durations (Santa Clara County 2003).

Table C-10. Exterior Noise Limits (Santa Clara County)

Receiving Land Use Category	Maximum L ₅₀ (dBA) 7 a.m. – 10 p.m.	Maximum L ₅₀ (dBA) 10 p.m. – 7 a.m.
One- and Two-Family Residential	55	45
Multi-Family Dwelling	n/a	50
Residential Public Space	55	n/a
Commercial	65	60
Light Industrial	70	70
Heavy Industrial	75	75

Source: Santa Clara County 2003.

Key:

dBA = A-weighted decibel scale

L₅₀ = A-weighted sound level that is exceeded 50 percent of the time

n/a = not applicable

Additionally, the County has established maximum noise levels for construction activities. The ordinance states that the standards (Table C-11) should not be exceeded for mobile equipment where technically and economically feasible.

Table C-11. Noise Limits for Construction Activities (Santa Clara County)

Time Period	Single- and Two-Family Dwelling Residential Area	Multifamily Dwelling Residential Area	Commercial Area
Daily, except Sundays and legal holidays 7 a.m. to 7 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7 p.m. to 7 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

Source: Santa Clara County 2003.

Key:

dBA = A-weighted decibel scale

Santa Clara County has a perception threshold of 1/100 in/sec (1-100 Hz) defined in their County Code (Section B11-151[dd]). Section B11-154(b)(7) of the County Code prohibits operating or permitting the operation of any device that creates a vibrating effect that a) endangers or injures the safety or health of human beings or animals; or b) annoys or disturbs a person of normal sensitivities; or c) endangers or injures personal or real properties (Santa Clara County 2003).

C.3.14.2 Cultural Resources

The County adopted a Historic Preservation Ordinance, (Ordinance NS-1100.96) in October 2006. Basic components included in the Historic Preservation Ordinance are: 1) purpose and intent; 2) definitions; 3) commission powers and duties (revision of Chapter 5, Division A6-60 through 65); 4) landmark designation criteria and process (including a requirement for owner consent for designation); 5) landmark design review process and findings; 6) appeals; 7) economic hardship; 8) maintenance; and 9) enforcement.

C.3.15 Santa Clara County OES Services

The Santa Clara County OES works with County departments, local cities and special districts to plan for disasters and emergencies. This work includes mitigating against, preparing for, responding to, and recovering from disasters. The Santa Clara County OES is also responsible for operation of the Emergency Operations Centers so they are ready in case of an emergency situation. This involves coordinating and conducting simulated disaster preparedness and response exercises and evaluating staff training. The *Santa Clara County Operational Area Emergency Operations Plan* (2008) provides guidance for emergency management phases: preparedness, response, recovery and mitigation for many types of emergencies and disasters including: major earthquake, wildland urban/interface fire, extreme weather, public health emergency, technological and resource emergency, hazardous materials incident, terrorism, flood and landslide (Santa Clara County 2008).

C.3.16 Santa Clara Valley Habitat Conservation Plan and Natural Communities Conservation Plan

The *Final Santa Clara Valley Habitat Conservation Plan and Natural Communities Conservation Plan (HCP/NCCP)* is a regional partnership between the County of Santa Clara, Santa Clara Valley Transportation Authority, SCVWD, and the Cities of San Jose, Gilroy and Morgan Hill, the CDFW, and the USFWS for the long-term protection of natural ecosystems and biodiversity (Santa Clara County 2012). The proposed HCP/NCCP study area covers approximately 520,000 acres and would create a Reserve System to preserve an estimated 45,000 acres of high-quality habitat for the benefit of covered species, natural communities, biological diversity, and ecosystem function. The plan calls for habitat restoration and enhancement of sensitive habitats including riparian woodlands and wetlands and preservation of major wildlife corridors between key habitat areas and between existing protected areas (Santa Clara County 2012). In-stream construction projects and operations and maintenance along with urban development in Santa Clara County with the potential to affect species covered by the HCP/NCCP can obtain incidental take permits for these actions on the condition that they incorporate the relevant conditions on covered activities described in Chapter 6 of the HCP in order to avoid or minimize impacts to covered species and natural communities.

The Plan includes the following 18 listed and non-listed species: federally threatened Bay checkerspot butterfly (*Euphydryas editha bayensis*); federally and state-threatened California tiger salamander (*Ambystoma californiense*); federally threatened and state species of special concern California red-legged frog (*Rana draytonii*); federal candidate and state species of special concern foothill yellow-legged frog (*Rana boylei*); state species of special concern western pond turtle (*Actinemys marmorata*); state species of special concern western burrowing owl (*Athene cunicularia*); federally endangered Least Bell's vireo (*Vireo bellii pusillus*); state candidate and state species of special concern tricolored blackbird (*Agelaius tricolor*); federally endangered and state threatened San Joaquin kit fox (*Vulpes macrotis mutica*); federally endangered, state threatened, and California Rare Plant Rank 1B.2 listed Tiburon paintbrush (*Castilleja affinis* ssp. *neglecta*); federally endangered and California Rare Plant Rank 1B.1 listed coyote ceanothus (*Ceanothus ferrisiae*); California Rare Plant Rank 1B.2 listed Mount Hamilton thistle (*Cirsium fontinale* var. *campylon*); federally endangered and California Rare Plant Rank 1B.1 listed Santa Clara Valley dudleya (*Dudleya abramsii* ssp. *setchellii*); California Rare Plant Rank 1B.2 listed fragrant fritillary (*Fritillaria liliacea*); California Rare Plant Rank 1B.1 listed Loma Prieta hoita (*Hoita strobilina*); California Rare Plant Rank 1B.2 listed smooth lessingia (*Lessingia micradenia* var. *glabrata*); federally endangered and California Rare Plant Rank 1B.1 listed Metcalf Canyon jewelflower (*Streptanthus albidus* ssp. *albidus*); and California Rare Plant Rank 1B.1 listed Most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus*).

C.3.17 Santa Clara Valley Water District Flood Control

SCVWD prepared the Draft Flood Protection & Stream Stewardship Master Plan in 2010, an update to the current master plan that was last updated in 2000. The Flood Protection and Stream Stewardship Master Plan provides guidance for public funds investment supporting the SCVWD's Flood Protection and Stream Stewardship Program. The update will extend the planning horizon to 2025 (SCVWD 2010a). The Safe, Clean Water and Natural Flood Protection Program helps to protect water resources in Santa Clara County. The 5-year implementation plan started in 2014 includes projects in key priority areas including priority C for the protection of water supply from earthquakes and other natural disasters (SCVWD 2016a).

The SCVWD participates in the Santa Clara Valley Urban Runoff Pollution Prevention Program with the thirteen cities and towns and Santa Clara County that are covered under the same NPDES Municipal Regional Stormwater Permit (MRP) for controlling the quality of stormwater discharge to South San Francisco Bay. The other co-permittees in addition to SCVWD include: Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, Sunnyvale and Santa Clara County. The C.3 Handbook provides guidance for project post-construction stormwater controls (Provision C.3 of the MRP) to be implemented in order to meet the requirements of the MRP (Santa Clara Valley [SCV] Urban

Runoff Pollution Prevention Program [URPPP] 2012). In addition to influencing the quality of stormwater discharge, these controls influence the volume and velocity of discharge from construction sites.

C.3.18 Santa Clara Valley Water District Groundwater Management Plan

Assembly Bill 3030, the Groundwater Management Act and SB 1938 encourages local water agencies to establish local GMPs. The SCVWD GMP was developed to assist in managing the groundwater basins underlying Santa Clara County. The following programs are documented in this GMP (SCVWD 2016b):

- Groundwater supply management programs that replenish the groundwater basins, sustain the basin's water supplies, help to mitigate groundwater overdraft, and sustain storage reserves for use during dry periods.
- Groundwater monitoring programs that provide data to assist SCVWD in evaluating and managing the groundwater basin.
- Groundwater quality management programs that identify and evaluate threats to groundwater quality and prevent or mitigate contamination associated with those threats.

SCVWD has developed the following outcome measures to gauge performance in meeting the groundwater basin management objectives (SCVWD 2016b):

- Projected end of year groundwater storage is greater than 278,000 AF in the Santa Clara Plain subbasin, 5,000 in Coyote Valley (due to different land use and management characteristics, SCVWD delineates the DWR's Santa Clara Subbasin [subbasin 2-9.02] into two groundwater management areas: the Santa Clara Plain and the Coyote Valley), and 17,000 AF in the Llagas Subbasin.
- Groundwater levels are above subsidence thresholds at the subsidence index wells (see Figure 6-3 for index well locations). SCVWD has established an acceptable subsidence rate of no more than 0.01 feet per year on average, which has been endorsed by the Water Retailer Groundwater Subcommittee.
- At least 95 percent of countywide water supply wells meet primary drinking water standards and at least 90 percent of wells in the southern part of the valley (South County) meet Basin Plan agricultural water quality objectives.

- At least 90 percent of wells have stable or decreasing concentrations of nitrate, chloride, and total dissolved solids (TDS).

C.3.19 Santa Clara Valley Water District Water Resources Protection Ordinance

This ordinance protects water resources managed by the SCVWD by regulating modifications, entry, use or access to water district facilities and/or direct easements. This ordinance States that none of these activities may be performed on or within a SCVWD facility or easement without prior issuance of an encroachment permit (SCVWD 2010b).

C.3.20 San Luis Reservoir SRA Resource Management Plan/ General Plan

The *San Luis Reservoir SRA RMP/GP* (Reclamation and CDPR 2013) sets forth the following goals for the protection, management, and restoration of vegetation and wildlife:

- Vegetation Goal RES-V1: Protect, maintain, and, where appropriate, restore the site's locally and regionally important native plant communities.
- Vegetation Goal RES-V2: Document and protect special-status plants and communities and manage for their perpetuation and enhancement.
- Vegetation Goal RES-V3: Control invasive and non-native species.
- Vegetation Goal RES-V4: Restore the project area's native grasslands through the use of best management practices.
- Wildlife Goal RES-W1: Maintain, protect, and enhance wildlife habitat for common, sensitive, and special-status wildlife species.

The following goals are related to recreational resources:

- Goal VIS-F1 - Maintain and provide new visitor facilities and uses that enhance recreational enjoyment of the site's history and character while avoiding resource degradation.
 - Plan for recreational opportunities within a regional context and in coordination with other plans (e.g., the Millerton Lake RMP, Pacheco State Park, Hollister Hills State Vehicular Recreation Area, and Merced County and Santa Clara County parks) so that facilities are balanced within the region and are compatible with the location and resources.

- Provide for a variety of day-use activities and overnight camping facilities that accommodate visitors of varying abilities.
- Goal VIS-F2 - Provide adequate shoreline and upland support facilities and management at each reservoir and use area to address current and future demand for permitted recreational uses, consistent with management zones and natural and cultural resource goals and guidelines.
 - Ensure that campground and day use additions and improvements respond to and are prioritized based on user demand.
- Goal VIS-F3 - Manage water surfaces and use areas to accommodate a variety of different user groups and minimize resource degradation and conflicts among users.
 - Resolve water surface use conflicts using a variety of methods, such as but not limited to seasonal and time-of-day restrictions and “no wake” or “reduced speed” zones.
 - Optimize and coordinate water and land based recreational uses by development of a boating management plan.
- Goal VIS-T1 - Provide an appropriate amount and variety of trails in a range of locations throughout the Plan Area as well as improved connectivity from existing trails.
 - Maintain a system of multi-use trails to meet visitor demand.
- Goal VIS-T2 - Balance the optimum visitor experience while avoiding habitat fragmentation or other site degradation.
 - Use BMPs to maintain trails and minimize erosion.

C.3.21 Traffic and Transportation Regulations

Traffic analysis in the State of California is guided by standards set at the State level by Caltrans, and by local jurisdictions. State highways fall under the jurisdiction of Caltrans. Other roadways fall under the local jurisdiction, either city or county, in which they are located.

Each jurisdiction has adopted standards regarding the desired performance level of traffic conditions on the circulation system within its jurisdiction. A performance measure called “Level of Service” (LOS) is used to characterize traffic operating conditions of a circulation element. Progressively worsening traffic operating conditions are given the letter grades “A” through “F”. Table C-12 summarizes the traffic operating conditions associated with each LOS

designation. Table C-13 provides LOS criteria for freeways in Santa Clara County, while Table C-14 exhibits LOS criteria for Merced County roadways.

Table C-12. Level of Service Characteristics

LOS	Traffic Condition
A	Free flow conditions; Low volumes; high operating speeds; uninterrupted flow; no restriction on maneuverability; drivers maintain desired speeds; little or no delays.
B	Stable flow conditions; operating speeds beginning to be restricted.
C	Stable flow but speed and maneuverability restricted by higher traffic volumes; satisfactory operating speed for urban conditions; delays at signals.
D	Approaching unstable flow; low speeds; major delays at signals; little freedom to maneuver.
E	Lower operating speeds; volume at or near capacity; unstable flow; major delays and stoppages.
F	Forced flow conditions; low speeds; volumes below capacity, may be zero; stoppages for long periods because of downstream congestion.

Source: Transportation Research Board 2000

Table C-13. Level of Service Criteria for Freeways – Santa Clara County

LOS	Density (passenger cars/mile/lane)	Speed (miles/hour)
A	≤ 11.0	≥ 67.0
B	11.0 – 18.1	66.5 – 67.0
C	18.0 – 26.0	66.0 – 66.5
D	26.0 – 46.0	46.0 – 66.0
E	46.0 – 58.0	35.0 – 46.0
F	> 58.0	< 35.0

Source: Santa Clara Valley Transportation Authority 2003

Table C-14. Level of Service Criteria for Roadways – Merced County

#	Area	Facility	Interchanges	Intersections	Flow	Lanes	Median	Level of Service (Average Annual Daily Traffic)				
								A	B	C	D	E
1	Urban	Freeway	< 2 miles apart	-	-	4	N/A	22,000	36,000	52,000	67,000	76,500
2	Urban	Expressway	-	-	-	4	Divided	-	-	21,400	31,100	32,900
3	Urban	Highway	-	-	Uninterrupted	2	Undivided	2,000	7,000	13,800	19,600	27,000
4	Urban	Highway	-	< 2/mile	-	2	Undivided	-	4,200	13,800	16,400	16,900
5	Urban	Highway	-	< 4.5/mile	-	2	Undivided	-	1,900	11,200	15,400	16,300
6	Urban	Collector	-	-	-	2	Undivided	-	-	4,800	10,000	12,600
7	Urban	Highway	-	< 4.5/mile	-	4	Undivided	-	3,500	23,200	29,100	30,600
8	Urban	Arterial	-	-	-	4	Undivided	-	-	15,600	27,800	29,400
9	Urban	Highway	-	< 2/mile	-	4	Undivided	3,500	20,900	24,600	25,700	-
10	Urban	Collector	-	-	-	4	Undivided	-	-	9,800	19,200	22,800
11	Urban	Highway	-	< 2/mile	-	2	Undivided	-	4,000	13,100	15,500	16,300
12	Urban	Arterial	-	-	-	2	Undivided	-	-	7,000	13,600	14,600
13	Transition	Freeway	-	-	-	4	-	23,500	38,700	52,500	62,200	69,100
14	Transition	Collector	-	-	-	2	Undivided	-	-	4,400	9,400	12,000
15	Rural	Freeway	-	-	-	6	-	33,100	54,300	73,900	87,400	97,200
16	Rural	Freeway	-	-	-	4	-	21,300	35,300	47,900	56,600	63,000
17	Rural	Non-Freeway	-	-	Uninterrupted	4	Divided	17,500	28,600	40,800	52,400	58,300
18	Rural	Non-Freeway	-	-	Isolated Stops	4	-	-	2,900	17,400	23,000	25,200
19	Rural	Non-Freeway	-	-	Uninterrupted	2	Undivided	2,600	5,300	8,600	13,800	22,300
20	Rural	Non-Freeway	-	-	Isolated Stops	2	Undivided	-	1,900	8,000	10,700	12,100
21	Suburban	Non-Freeway	-	-	Interrupted	4	Divided	-	5,300	25,200	29,400	31,200
22	Suburban	Highway	-	-	Uninterrupted	2	Undivided	2,500	7,200	12,700	17,300	23,500
23	Suburban	Arterial	-	-	Interrupted	2	Undivided	-	2,200	11,000	13,900	14,900
24	Suburban	Collector	-	-	-	2	Undivided	-	-	1,900	7,600	10,100

Source: Merced County 2013.

While most motorists consider LOS A, B, and C as satisfactory travel conditions, LOS D is considered marginally acceptable. Congestion and delay are considered unacceptable to most motorists and are given the LOS E or F ratings. Table C-15 presents local and regional LOS standards established by each jurisdiction within the study area.

Table C-15. LOS Standards of Significance

Regulatory Agency	LOS Thresholds
Caltrans ¹	LOS C for rural interregional routes and LOS D for urban interregional routes
Merced County ²	LOS D for freeways and urban roadways, LOS C for other rural roadways
Santa Clara County ³	LOS E for Congestion Management Program (CMP) facilities and LOS D for other facilities
City of Los Banos ⁴	LOS C for roadway segments
City of Gustine ⁵	LOS D for major roadways
City of Gilroy ⁶	LOS C for roadways and LOS D for some commercial and industrial areas

Notes:

¹ Source: Merced County Association of Governments 2014

² Source: Merced County 2013

³ Source: Santa Clara Valley Transportation Authority (VTA) 2014

⁴ Source: City of Los Banos 2009

⁵ Source: City of Gustine 2002

⁶ Source: City of Gilroy 2002

C.3.22 Tree Protection Ordinances

Multiple cities and counties within the area of analyses have local regulations pertaining to the protection of native or locally important trees and/or street trees in public areas. The general plan policies and municipal codes typically include requirements for the protection of street trees and establish a permit or review process for the evaluation of potential impacts on street trees. The tree protection ordinances apply to all trees over specific size thresholds, and native tree species including oaks, cottonwood, sycamore, madrone, and other species. In addition, some trees are considered significant because of history, girth, height, or other unique quality and can be designated a heritage trees and protected under these ordinance. The cities and counties with applicable ordinances include:

- County of Santa Clara – The County of Santa Clara requires a permit for removing trees of varying sizes in different sections of the unincorporated portions of the county. The ordinance includes exceptions for trees that are irreversibly diseased or dead, or that present a hazard to life and/or personal property. Permit application requirements include a written justification for the removal, and a replanting plan (Santa Clara County 2002).

- City of San Jose – The City of San Jose requires a permit for the pruning or removal of any tree within 12 feet of a public right of way, any tree identified on the City’s Heritage Tree List, or any tree on a multifamily, commercial or industrial property. In addition, a permit is required for the removal of any tree within the City with a circumference larger than 56 inches at 2 feet above the ground. Dead, dying and diseased trees are not exempt from the permit and still require permit for removal. Removal of any ordinance sized tree requires replacement on site (City of San Jose 2017).

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