Appendix 4A

Federal and State Policies and Regulations

4A.1 Federal Policies and Regulations

Federal policies and regulations presented in this appendix are related to requirements that affect surface water, biological, energy, agricultural, air quality, and cultural resources. Federal policies and regulations that affect operations of the Central Valley Project are included in Appendix 3A, No Action Alternative: Central Valley Project and State Water Project Operations, and are not included in this appendix.

4A.1.1 Clean Water Act

The Federal Water Pollution Control Act Amendments of 1972, also known as the Clean Water Act (CWA), established the institutional structure for the U.S. Environmental Protection Agency (USEPA) to regulate discharges of pollutants into the waters of the United States, establish water quality standards, conduct planning studies, and provide funding for specific grant projects. The Clean Water Act was further amended through the Clean Water Act of 1977 and the Water Quality Act of 1987. The California State Water Resources Control Board (SWRCB) has been designated by the USEPA along with the nine Regional Water Quality Control Boards (RWQCBs) to develop and enforce water quality objectives and implementation plans in California, as described below under Section 4A.2, State Policies and Regulations.

Section 401 of the CWA requires water discharges into navigable waters of the United States to apply for a Federal license or permit and to certify that the discharge will be in compliance with specified provisions of the CWA. Federal permits that are issued related to disturbance of waters of the United States (such as streams and wetlands) also require a Water Quality Certification in accordance with CWA Section 401. In California, Section 401 water quality certifications are issued by the RWQCB and/or the SWRCB, in accordance with the California Code of Regulations Title 23, sections 3836, 3855, and 3856.

Section 402 established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point-source and nonpoint-source discharges of pollutants into waters of the United States. An NPDES permit sets specific discharge limits for point and nonpoint sources discharging pollutants into waters of the United States and establishes monitoring and reporting requirements. The NPDES permits are issued for long-term discharges, including discharges from treatment plants, and temporary discharges, such as discharges during construction activities (e.g., General Permit for Storm Water Discharges Associated with Construction Activities).

Section 404 requires the U.S. Army Corps of Engineers (USACE) to issue permits for discharge of dredge or fill material into navigable waters, their tributaries, and associated wetlands. Activities regulated by 404 permits include, but are not limited to, dredging, bridge construction, flood control actions, and some fishing operations.

Section 303 requires preparation of basin plans that designate the beneficial uses of waters within each watershed basin and identify water quality objectives designed to protect the beneficial uses. Under Section 303(d), the USEPA identifies and ranks waterbodies for which existing pollution controls are insufficient to attain or maintain water quality standards based upon information prepared by all states, territories, and authorized Indian tribes. This list of impaired waters for each state comprises the state's 303(d) list. Each state must establish priority rankings and develop Total Maximum Daily Loads (TMDLs) for all impaired waters. TMDLs calculate the greatest pollutant load that a waterbody can receive and still meet water quality standards and designated beneficial uses.

The National Toxics Rule was established by USEPA in 1992 to provide ambient water quality criteria for priority toxic pollutants to protect aquatic life and human health in accordance with CWA Section 303.

The Secretary of the Interior established the first antidegradation policy in 1968. In 1975, USEPA included the antidegradation requirements in the Water Quality Standards Regulation (40 Code of Federal Regulations [CFR] 130.17, 40 CFR 55340-41). The requirements were included in the 1987 CWA amendment in Section 303(d)(4)(B). The Federal antidegradation policy requires states to develop regulations to allow increases in pollutant loadings or changes in surface water quality only if: (1) existing surface water uses are maintained and protected, and established water quality requirements are met; (2) if water quality requirements cannot be maintained by a project, water quality must be maintained to fully protect "fishable/swimmable" uses and other existing uses; and (3) for Outstanding National Resource Waters water quality criteria where "States may allow some limited activities which result in temporary and short-term changes in water quality" (Water Quality Standards Regulations) but would not impact existing uses or special use of these waters.

4A.1.2 Federal Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The SDWA authorizes USEPA to set national health-based standards for drinking water to protect against both naturally occurring and human-made contaminants that may be found in drinking water. The law was amended in 1986 and 1996, and requires many actions to protect drinking water and its sources, including rivers, lakes, reservoirs, springs, and groundwater wells.

4A.1.3 U.S. Army Corps of Engineers Public Notice 5820A

Section 10 of the Rivers and Harbors Act of 1899 requires that a letter of permission or permit be obtained from the USACE for the construction of structures in, over, or under; excavation of material from; and deposition of material into navigable waters of the United States regulated by USACE. "Navigable waters of the United States" is defined as those waters subject to the ebb and flow of the tide shoreward to the mean high-water mark or those that are used, have been used in the past, or may be susceptible to use in interstate or foreign commerce.

4A.1.4 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act, as amended in 1964, was enacted to protect fish and wildlife when Federal actions result in the control or modification of a natural stream or body of water. The statute requires Federal agencies to take into consideration the effect that water-related projects would have on fish and wildlife resources. Consultation and coordination with the U.S. Fish and Wildlife Service (USFWS) and state fish and game agencies are required to address ways to prevent loss of and damage to fish and wildlife resources and to further develop and improve these resources.

4A.1.5 Endangered Species Act

The Federal Endangered Species Act (ESA) applies to proposed Federal, state, and local projects that may result in the "take" of a fish or wildlife species that is federally listed as threatened or endangered and to actions that are proposed to be authorized, funded, or undertaken by a Federal agency and that may jeopardize the continued existence of any federally listed fish, wildlife, or plant species or which may adversely modify or destroy designated critical habitat for such species. "Take" is defined under the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct" (16 United States Code [U.S.C.] Section 1532(19)). Under Federal regulations, "harm" is defined as "an act which actually kills or injures wildlife," including significant habitat modification or degradation where it actually results, or is reasonably expected to result, in death or injury to wildlife by substantially impairing essential behavioral patterns, including breeding, feeding, sheltering, spawning, rearing, and migrating (50 CFR sections 17.3, 222.102). "Harass" is defined similarly broadly. If there is a potential that implementing a project would result in take of a federally listed species, either a habitat conservation plan (HCP) and incidental take permit, under Section 10(a) of the ESA, or a Federal interagency consultation, under Section 7 of the ESA, is required.

Under the ESA, the National Marine Fisheries Service (NMFS) has jurisdiction over anadromous fish, marine fish and reptiles, and most marine mammals, and the USFWS has jurisdiction over all other species, including all terrestrial and plant species, freshwater fish species, and a few marine mammals (such as the California sea otter). Listed species within the project area are described in subsequent sections of this appendix.

Besides listing species within their respective jurisdictions as threatened or endangered, issuing incidental take permits, and conducting interagency consultations, USFWS and NMFS also are charged with designating "critical habitat" for threatened and endangered species, which the ESA defines 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 a species' conservation, and those features 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 of the species (16 U.S.C. Section 1532(5)(A)). USFWS and NMFS also prepare draft recovery plans for the listed species.

4A.1.5.1 NMFS Public Draft Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-run Chinook Salmon and Central Valley Spring-run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead

The NMFS Public Draft Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-run Chinook Salmon and Central Valley Spring-run Chinook Salmon and the Distinct Population Segment of Central Valley Steelhead provides a roadmap that describes the steps, strategy, and actions recommended to return winter-run Chinook Salmon, spring-run Chinook Salmon, and Steelhead to viable status in the Central Valley, thereby ensuring their long-term persistence and evolutionary potential. The general near-term strategic approach to recovery includes the following elements:

- Secure all extant populations.
- Begin collecting distribution and abundance data for Steelhead in habitats accessible to anadromous fish.
- Minimize straying from hatcheries to natural spawning areas.
- Conduct critical research on fish passage above rim dams, reintroductions, and climate change.

The long-term approach to recovery includes the following elements:

- Ensure that every extant diversity group has a high probability of persistence.
- Until all evolutionarily significant unit viability criteria have been achieved, no population should be allowed to deteriorate in its probability of persistence.
- High levels of recovery should be attempted in more populations than identified in the diversity group viability criteria because not all attempts will be successful.
- Individual populations within a diversity group should have persistence probabilities consistent with a high probability of diversity group persistence.
- Within a diversity group, the populations to be restored/maintained at viable status should be selected.

- Allow for normative metapopulation processes, including the viability of core populations, which are defined as the most productive populations.
- Allow for normative evolutionary processes, including the retention of genetic diversity and an increase in genetic diversity through the addition of viable populations in historical habitats.
- Minimize susceptibility to catastrophic events.

4A.1.5.2 USFWS Recovery Plan for the Sacramento-San Joaquin Delta Native Fishes

The Recovery Plan for the Sacramento-San Joaquin Delta Native Fishes, released in 1996, addresses the recovery needs for several fishes that occupy the Sacramento-San Joaquin Delta, including Delta Smelt, Sacramento Splittail, Longfin Smelt, Green Sturgeon, Chinook Salmon (spring-run, late fall-run, and San Joaquin fall-run), and Sacramento Perch (believed to be extirpated). The objective of the plan is to establish self-sustaining populations of these species that will persist indefinitely. This objective would be accomplished by managing the estuary to provide better habitat for aquatic life in general and for the fish addressed by the plan. Recovery actions include tasks such as increasing freshwater flows; reducing fish entrainment losses to water diversions; reducing the effects of dredging, contaminants, and harvest; developing additional shallow-water habitat, riparian vegetation zones, and tidal marsh; reducing effects of toxic substances from urban nonpoint sources; reducing the effects of introduced species; and conducting research and monitoring.

4A.1.6 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act (Public Law 104 to 297), requires that all Federal agencies consult with NMFS on activities or proposed activities authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH) for commercially managed marine and anadromous fish species. EFH includes specifically identified waters and substrate necessary for fish spawning, breeding, feeding, or growing to maturity. EFH also includes all habitats necessary to allow the production of commercially valuable aquatic species, to support a long-term sustainable fishery, and to contribute to a healthy ecosystem (16 U.S.C. Section 1802(10)).

In addition to riverine reaches supporting Chinook Salmon, the Pacific Fishery Management Council (PFMC) has designated the Sacramento-San Joaquin Delta (Delta), San Francisco Bay, and Suisun Bay as EFH to protect and enhance habitat for coastal marine fish and macroinvertebrate species that support commercial fisheries such as Pacific salmon. Chinook Salmon and Coho Salmon are Actively Managed Species under the Pacific Coast Salmon Plan. Because EFH applies only to commercial fisheries, Chinook and Coho Salmon habitats are included, but not those of Steelhead.

Three fishery management plans—Pacific Salmon, Coastal Pelagic, and Groundfish—have been issued by the PFMC for several species that occur in the project area. The Northern Anchovy and Starry Flounder are identified by the PFMC as Monitored Species in the Coastal Pelagic Species Fishery Management Plan and the Pacific Coast Groundfish Fishery Management Plan, respectively, and are subject to EFH consultation as a result. Pacific Sardine are classified as an Actively Managed Species in the Coastal Pelagic Species Fishery Management Plan.

4A.1.7 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) was enacted in 1972. All marine mammals are protected under the MMPA. The MMPA prohibits, with certain exceptions, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. It defines "take" to mean "to hunt harass, capture, or kill" any marine mammal or attempt to do so. Exceptions to the moratorium can be made through permitting actions for take incidental to commercial fishing and other nonfishing activities; for scientific research; and for public display at licensed institutions such as aquaria and science centers.

4A.1.8 National Invasive Species Act of 1996

The National Invasive Species Act (Public Law 104-332) reauthorizes and amends the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 to mandate regulations to reduce environmental and economic impacts from invasive species and to prevent introduction and spread of aquatic nuisance species, primarily through ballast water. As the primary Federal law regulating ballast water discharges, the act calls primarily for voluntary ballast water exchange by vessels entering the United States after operating outside the 200-nautical-mile Exclusive Economic Zone of the United States.

The authority to regulate ballast water discharges in the United States has recently shifted to include the USEPA in addition to the U.S. Coast Guard. Since February 2009, the USEPA must regulate ballast water and other discharges incidental to normal vessel operations under Section 402 of the CWA. U.S. Coast Guard regulations, developed under authority of the revised and reauthorized act, also require ballast water management (i.e., ballast water exchange) for vessels entering United States waters from outside the Exclusive Economic Zone, with certain exceptions. The act also authorized funding for research on aquatic nuisance species prevention and control in San Francisco Bay, the Delta, the Pacific Coast, and other areas of the United States.

4A.1.8.1 Executive Order 13112: Invasive Species

Executive Order (EO) 13112 (February 3, 1999) directs all Federal agencies to prevent and control the introduction and spread of invasive nonnative species in a cost-effective and environmentally sound manner to minimize their effects on economic, ecological, and human health. The executive order was intended to build on existing laws, such as National Environmental Policy Act (NEPA), the

Nonindigenous Aquatic Nuisance Prevention and Control Act, the Lacey Act, the Plant Pest Act, the Federal Noxious Weed Act, and the ESA. EO 13112 established a national Invasive Species Council made up of Federal agencies and departments, and a supporting Invasive Species Advisory Committee composed of state, local, and private entities. The Invasive Species Council and Advisory Committee oversee and facilitate implementation of the executive order, including preparation and revision of the National Invasive Species Management Plan.

4A.1.9 Wild and Scenic Rivers Act

Congress created the National Wild and Scenic Rivers Act in 1968 (Public Law 90-542; U.S.C. 1271 et seq.) to preserve rivers and outstanding natural, cultural, or recreational features in a free-flowing condition. High priority is placed on visual resource management of these rivers to preserve or restore their scenic characteristics. Under this act, a Federal agency may not assist the construction of a water resources project that would have a direct and adverse effect on the free-flowing, scenic, and natural values of a wild or scenic river. If the project would affect the free-flowing characteristics of a designated river or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area, such activities should be undertaken in a manner that would minimize adverse impacts and should be developed in consultation with the National Park Service.

4A.1.10 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements a series of international treaties that provide migratory bird protection. The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds, and the act provides that it shall be unlawful, except as permitted by regulations, "to pursue, take, or kill any migratory bird, or any part, nest or egg of any such bird" (16 U.S.C. Section 703). This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA was published in the March 10, 2010, *Federal Register* (*Federal Register*, Volume 75, page 9282 [75 FR 9282]).

4A.1.10.1 Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds

EO 13186 (January 10, 2001) directs Federal agencies that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement a memorandum of understanding with USFWS to promote the conservation of migratory bird populations. The memorandum of understanding should include implementation actions and reporting procedures that would be followed through each agency's formal planning process, such as resource management plans and fisheries management plans.

4A.1.10.2 North American Waterfowl Management Plan and Central Valley Joint Venture

In 1986, the North American Waterfowl Management Plan (NAWMP) was signed by the United States and Canada. It provides a broad framework for

waterfowl management through 2000 and includes recommendations for wetland and upland habitat protection, restoration, and enhancement. Implementing the NAWMP is the responsibility of designated joint ventures. The Central Valley Habitat Joint Venture, formally organized in 1988, was one of the original six priority joint ventures formed under the NAWMP. Renamed the Central Valley Joint Venture in 2004, it is composed of 21 Federal and state agencies, conservation organizations, and Pacific Gas and Electric Company (PG&E).

4A.1.11 Executive Order 11990: Protection of Wetlands

EO 11990 (May 24, 1977) established the protection of wetlands and riparian systems as the official policy of the Federal government. It requires all Federal agencies to consider wetland protection as an important part of their policies and take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

4A.1.12 Federal Power Act

The Federal Power Act, 16 U.S.C. § 791-828(c), passed in 1920 and amended in 1935 and 1986, created what is now the Federal Energy Regulatory Commission (FERC), an independent regulatory agency that oversees the natural gas, oil, and electricity markets, regulates the transmission and sale of these energy resources (except for oil), provides licenses for non-federal hydroelectric plants, and addresses environmental matters arising in any of the areas above. The agency is governed by a five-member commission appointed by the President with the advice and consent of the Senate. The Electric Consumers Protection Act of 1986 amended the Federal Power Act of 1920 to require FERC to give equal consideration to non-power-generating values such as the environment, recreation, fish, and wildlife, as is given to power and development objectives when making hydroelectric project licensing decisions.

4A.1.13 Western Area Power Administration

The Western Area Power Administration (Western) is one of four power marketing administrations within the U.S. Department of Energy that markets and transmits electricity from multi-use water projects to retail power distribution companies and public authorities. Western markets and delivers hydroelectric power and related services within a 15-state region of the central and western United States. The transmission system carries electricity from 55 hydropower plants operated by Reclamation, USACE, and the International Boundary and Water Commission. Together, these plants have a capacity of 10,600 megawatts.

Western sells excess Central Valley Project (CVP) capacity and energy that are supplementary to CVP internal needs to municipal utilities, irrigation districts, and institutions and facilities such as wildlife refuges, schools, prisons, and military bases at rates designed to recover CVP costs. As part of its marketing function, Western ensures that CVP project use loads are met at all times by using a mix of generation resources including CVP generation and other purchased resources. In marketing power surplus to the CVP project needs, Western follows a formal procedure for allocating CVP energy to preference customers.

Preference power customers have 20-year contracts for their share of the CVP energy that is in excess of CVP needs.

In addition to preference power customers, there are also first preference customers. First preference customers are a special class of customers who are statutorily entitled to up to 25 percent of the generation built in their counties. The two CVP projects whose enabling legislation provided for first preference power are New Melones Dam, located in Tuolumne and Calaveras counties, and Trinity and Lewiston dams, located in Trinity County.

4A.1.14 Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) directs Federal agencies to consider the effects of Federal programs or activities on farmland, and ensure that such programs, to the extent practicable, are compatible with state, local, and private farmland protection programs and policies. The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible, Federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency. Activities that may be subject to the FPPA include (among others) reservoir and hydroelectric projects, Federal agency projects that convert farmland, and other projects completed with Federal assistance. The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) implements the FPPA. The NRCS has established a rating process under the FPPA to assess options for land use on an evaluation of productivity weighed against commitment to urban development.

4A.1.15 Coastal Zone Management Act

Congress passed the Coastal Zone Management Act (CZMA) in 1972 in response to the challenges of growth in coastal areas of the United States. The act is intended to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." The CZMA is administered by the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management (OCRM), and provides incentives for states to manage and protect their coastal resources. The CZMA encourages states to prepare coastal zone management programs that meet specified requirements and submit them to the OCRM for approval. States with approved coastal management programs become eligible for Federal funding assistance and other benefits. Applicants for Federal permits and licenses and Federal agencies proposing specific activities in the coastal zone are required by the CZMA to obtain a consistency certification from the state's coastal management agency.

The California Coastal Commission is the lead agency for the Coastal Zone Management Program in California. In California, the Coastal Zone Management Program includes the Pacific Ocean coast and the area within San Francisco Bay

and Suisun Marsh under the jurisdiction of the San Francisco Bay Conservation and Development Commission.

4A.1.16 Federal Water Project Recreation Act

The Federal Water Project Recreation Act (16 U.S.C. sections 460(L)(12)–460(L)(21)) declares the intent of Congress that recreation and fish and wildlife enhancement be given full consideration as purposes of Federal water development projects if non-federal public bodies agree to: (1) bear not less than one-half the separable costs allocated for recreational purposes or 25 percent of the cost for fish and wildlife enhancement; (2) administer project land and water areas devoted to these purposes; and (3) bear all costs of operation, maintenance and replacement. Where Federal lands or authorized Federal programs for fish and wildlife conservation are involved, cost-sharing is not required.

This act also authorizes the use of Federal water project funds for land acquisition in order to establish refuges for migratory waterfowl when recommended by the Secretary of the Interior, and authorizes the Secretary to provide facilities for outdoor recreation and fish and wildlife at all reservoirs under Department of the Interior (DOI) control, except those within national wildlife refuges.

4A.1.17 Federal Land and Water Conservation Fund Act

The Land and Water Conservation Fund was established by Congress in 1964 and is administered by the National Park Service. The fund provides money to Federal, state, and local agencies as well as to six territories to purchase lands, waters, and wetlands for the benefit of all Americans. Lands and waters purchased through the Land and Water Conservation Fund are used to:

- Provide recreational opportunities
- Provide clean water
- Preserve wildlife habitat
- Enhance scenic vistas
- Protect archaeological and historical sites
- Maintain the pristine nature of wilderness areas

4A.1.18 Bureau of Land Management Resource Management Plans

Under the Federal Land Policy and Management Act of 1976, DOI Bureau of Land Management (BLM) is responsible for managing public lands for multiple uses and sustained yield, ensuring that the scenic values of these public lands are considered, and avoiding land uses that may have negative impacts. Resource management plans for public lands are developed to guide BLM actions to protect ecological and scientific values; preserve public lands in their natural condition, where appropriate; provide food and habitat for fish and wildlife and domestic animals; provide for outdoor recreation and human occupancy and use; and recognize the nation's need for natural resources from the public lands, such as minerals, food, timber, and fiber.

4A.1.19 Federal Clean Air Act

National air quality policies are regulated through the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 amendments. Basic elements of the CAA include national ambient air quality standards (NAAQS) for criteria air pollutants, hazardous air pollutants standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

4A.1.19.1 National Ambient Air Quality Standards and Federal Air Quality Designations

Pursuant to the CAA, the USEPA establishes NAAQS for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur oxides (SOx), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}), particulate matter less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$), and lead (Pb). These pollutants are referred to as criteria pollutants because numerical health-based criteria have been established that define acceptable levels of exposure for each pollutant.

The USEPA has revised the NAAQS several times since their original implementation and will continue to do so as the health effects of exposure to pollution are better understood. As new NAAQS are adopted, ambient air quality monitoring data are reviewed by the regulatory agencies for each geographic area, and the USEPA uses the findings to designate the area's pollutant-specific attainment status.

The USEPA designates areas as attainment, nonattainment, or unclassified for individual criteria pollutants depending on whether the area achieves (i.e., attains) the applicable NAAQS for each pollutant. An area can be designated as attainment for one pollutant (for example, NO_2) and nonattainment for others (for example, O_3 and PM_{10}). Areas that lack monitoring data are designated as unclassified areas. Unclassified areas are treated as attainment areas for regulatory purposes.

For some pollutants, there are numerous classifications of the nonattainment designation, depending on the severity of an area's nonattainment status. For example, the O_3 nonattainment designation has eight subclasses: basic, transitional, marginal, moderate, serious, severe 15, severe 17, and extreme.

Under the 1977 CAA amendments, states (or areas within states) with ambient air quality concentrations that do not meet the NAAQS are required to develop and maintain state implementation plans (SIPs). These plans constitute a federally enforceable definition of the state's approach and schedule for the attainment of the NAAQS.

Areas that were designated as nonattainment in the past but have since achieved the NAAQS are further classified as attainment maintenance areas. The maintenance classification remains in effect for 20 years from the date when the area is determined by the USEPA to meet the NAAQS. States must obtain USEPA approval of maintenance plans to ensure continued attainment over these 20-year time frames.

4A.1.19.2 Federal General Conformity Requirements

The 1977 CAA amendments state that the Federal government is prohibited from engaging in, supporting, providing financial assistance for, licensing, permitting, or approving any activity that does not conform to an applicable SIP. In the 1990 CAA amendments, the USEPA included provisions requiring Federal agencies to ensure that actions undertaken in nonattainment or attainment maintenance areas are consistent with applicable SIPs. The process of determining whether a Federal action is consistent with applicable SIPs is called "conformity" determination.

These conformity provisions were put in place to ensure that Federal agencies would contribute to and not undermine efforts to attain the NAAQS. The USEPA has issued two conformity regulations: (1) a transportation conformity regulation that applies to transportation plans, programs, and projects and (2) a general conformity regulation that applies to all other Federal actions. A conformity determination is a process that demonstrates how an action would conform to the applicable SIP, and is required only for the project alternative that is ultimately selected and approved. If a project's emissions cannot be reduced sufficiently and if air dispersion modeling cannot demonstrate conformity, then either a plan for mitigating or a plan for offsetting the emissions would need to be developed. The general conformity determination is submitted in the form of a written finding that is issued after a minimum 30-day public comment period on the draft determination.

The USEPA general conformity regulation applies only to Federal actions that result in emissions of "nonattainment or maintenance pollutants" or their precursors in federally designated nonattainment or maintenance areas. The general conformity regulation establishes a process to demonstrate that Federal actions would be consistent with applicable SIPs and would not cause or contribute to new violations of the NAAQS, increase the frequency or severity of existing violations of the NAAQS, or delay the timely attainment of the NAAQS. The emission thresholds that trigger requirements of the general conformity regulation for Federal actions emitting nonattainment or maintenance pollutants, or their precursors, are called *de minimis* levels.

4A.1.19.3 Prevention of Significant Deterioration/New Source Review and New Source Performance Standards

The CAA and amendments also include regulations intended to prevent significant deterioration of air quality in attainment or maintenance areas, to provide for New Source Review (NSR) of major sources and modifications in nonattainment areas, and to establish emission performance standards for new stationary sources or New Source Performance Standards (NSPS). Federal Prevention of Significant Deterioration (PSD)/NSR regulations apply to major stationary sources of emissions in attainment and maintenance areas. NSPS apply to various types of new, modified, or reconstructed emissions units, and apply to such units regardless of whether these units are located at facilities that are "major" sources of emissions for PSD/NSR purposes.

4A.1.19.4 Federal Regulations for Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are defined as air pollutants that may cause serious human health effects, including mortality, but which are not regulated through issuance of a national ambient air quality standard.

The USEPA has developed regulations to evaluate and, if necessary, mitigate HAPs emissions sources. Prior to the 1990 CAA amendments, the USEPA established pollutant-specific National Emission Standards for Hazardous Air Pollutants (NESHAPs). NESHAPs were established for benzene, vinyl chloride, radionuclides, mercury, asbestos, beryllium, inorganic arsenic, radon 222, and coke oven emissions. The 1990 CAA amendments list 189 total pollutants that are defined as HAPs. For this list of pollutants, the USEPA is required to set standards for categories and subcategories of sources that emit HAPs, rather than for the pollutants themselves. USEPA began issuing the new standards, referred to as Maximum Achievable Control Technology (MACT) standards, in November 1994. NESHAPs set before 1991 remain applicable.

The applicability of MACT standards is typically determined by each facility's Potential To Emit (PTE) HAPs from all applicable sources. The facility-wide PTE HAP applicability threshold values are 10 tons per year (tpy) for a single HAP and 25 tpy for any two or more HAPs.

4A.1.19.5 Federal Standards for Mobile Sources

The USEPA's Office of Transportation and Air Quality regulates air pollution from motor vehicles and engines and the fuels used to operate them. The USEPA defines "mobile sources" to include cars, light-duty trucks, heavy-duty trucks, buses, recreational vehicles (such as dirt bikes and snowmobiles), farm and construction machines, lawn and garden equipment, marine engines, aircraft, and locomotives.

Starting in the 1970s, the USEPA has established progressively more stringent standards for CO, hydrocarbons, nitrogen oxides (NOx), and particulate matter (PM) emissions from on-road vehicles. Since the early 1990s, USEPA has developed similar standards for non-road engines and equipment, and also set tighter limits on sulfur allowed in fuels used for mobile sources. Emission standards set limits on the amount of pollution a vehicle or engine can emit, and are designed to force future vehicles and engines to meet stricter standards.

4A.1.20 Federal Policies and Regulations for Greenhouse Gas Emissions

Currently, no Federal regulations or standards specifically regulate greenhouse gas (GHG) emissions for the purposes of addressing climate change. The Council on Environmental Quality (CEQ) has issued draft NEPA guidance on GHG and climate change. USEPA, through the CAA, regulates emissions of certain GHGs through its mobile source standards and stationary source permitting regulations. The U.S. Supreme Court in Massachusetts v. USEPA (Supreme Court Case 05-1120) found that USEPA has the authority to list GHGs as pollutants and to regulate emissions of GHGs under the CAA.

4A.1.20.1 CEQ Guidance Related to Greenhouse Gas Emissions

The CEQ has issued updated draft NEPA guidance on the consideration of the effects of climate change and GHG emissions. Issued on December 18, 2014, this guidance advises Federal agencies that they should consider the GHG emissions caused by Federal actions, adapt their actions to consider climate change effects throughout the process, and address these issues in their agency procedures. Where applicable, the scope of the NEPA analysis should cover the GHG emissions effects of a proposed action and alternative actions, as well as the relationship of climate change effects, on a proposed action or alternatives. The CEQ guidance is still considered draft as of the writing of this document and is not an official CEQ policy document.

4A.1.20.2 Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, USEPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule applies to most entities that emit 25,000 metric tpy of carbon dioxide equivalents (CO2e) or more. Starting in 2010, owners of facilities of sufficient size were required to submit an annual GHG emissions report with detailed calculations of GHG emissions from specified sources, such as stationary source fuel combustion. The Reporting Rule mandates recordkeeping, and administrative requirements allow USEPA to verify the annual GHG emissions reports.

4A.1.20.3 Environmental Protection Agency Endangerment and Cause and Contribute Findings

On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- **Endangerment Finding:** The Administrator found that the current and projected atmospheric concentrations of six key GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator found that the combined emissions of GHGs from new motor vehicles and new motor vehicle engines contribute to GHG pollution, which threatens public health and welfare.

In addition, USEPA has formally recognized climate change as a threat to water supply in their National Water Program strategy for response to climate change.

4A.1.20.4 Greenhouse Gas Tailoring Rule

On May 13, 2010, the USEPA issued the Tailoring Rule to address GHG emissions from stationary sources under the CAA permitting programs for major sources. This final rule set the thresholds for Steps 1 and 2 of a phase-in approach to regulating GHG emissions under the PSD/NSR and Title V Operating Permit programs. Neither of these major source permitting programs is applicable to the Transfer Project or the Proposed Project or any of the alternatives.

4A.1.20.4.1 Light-Duty Vehicle Greenhouse Gas Emission Standards and Fuel Economy Standards

On May 7, 2010, the USEPA and the National Highway and Traffic Safety Administration issued a joint final rule for Light-Duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards. The standards have been developed to reduce GHG emissions from mobile sources and improve fuel economy.

4A.1.21 Antiquities Act of 1906

The Antiquities Act of 1906 (16 U.S.C. sections 431–433) was the first Federal legislation promulgated to protect cultural resources on Federal lands. The act establishes a permit program for qualified institutions and provides fines or imprisonment for unpermitted persons convicted of appropriating, excavating, injuring, or destroying historic or prehistoric resources or objects of antiquity on lands controlled or managed by the Federal government.

4A.1.22 The Archaeological Resources Protection Act of 1979

The Archaeological Resources Protection Act of 1979 (16 U.S.C. sections 470aa-470mm) was adopted to strengthen the enforcement and penalties of the Antiquities Act. It regulates and permits the excavation of archaeological sites on Federal and Indian lands, and governs the removal and management of archaeological collections from these sites. It allows for enforcement of criminal and civil penalties against those who loot, vandalize, or illegally buy or sell archaeological resources (defined as items of at least 100 years of age).

4A.1.23 National Historic Preservation Act of 1966

Section 106 of the National Historic Preservation Act of 1966 (NHPA) and its implementing regulations (36 CFR Part 800) require Federal agencies to consider the effects of their undertakings on cultural resources that are, or that may be, eligible for listing in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation an opportunity to comment. NRHP-eligible resources are considered to be "significant." The criteria used to evaluate eligibility for listing in the NRHP are further discussed in the next subsection.

The Section 106 process that is typically associated with NEPA compliance requires consultation of the Federal lead agency with other Federal, state, and local agencies, the Advisory Council on Historic Preservation, the State Historic Preservation Officer, Indian tribes, and interested members of the public, such as historical societies. Throughout the Section 106 process, the Federal lead agency and consulting parties work together to identify adverse impacts on sites of cultural significance or historic properties, and seek ways to avoid, minimize, or mitigate the adverse effects. A Memorandum of Agreement or Programmatic Agreement is issued by the participating parties that includes the measures agreed upon to avoid or reduce (i.e., mitigate) adverse effects. For large or complex undertakings, a Programmatic Agreement may also be negotiated to develop a phased approach to historic properties management or alternative Section 106

processes through consultations. Thus, impacts to cultural resources that are identified in a NEPA document are addressed through Section 106.

Section 110 of the NHPA sets out the broad responsibilities of Federal agencies for identifying and protecting historic properties under their jurisdiction, and for avoiding unnecessary damage to them. It is intended to ensure that an historic preservation program is fully integrated into the ongoing program of each Federal agency. Section 110 allows the costs of preservation activities as eligible project costs in all undertakings conducted or assisted by a Federal agency. Federal agencies are directed to withhold grants, licenses, approvals, or other assistance to applicants who intentionally damage or adversely affect historic properties in an effort to avoid the Section 106 process.

4A.1.24 National Register of Historic Places

The NRHP was authorized under the NHPA to identify, evaluate, and protect historic and archaeological resources. The National Park Service, under the Secretary of the Interior, administers the NRHP through the consultation and review functions of the Advisory Council on Historic Preservation. Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant to American history, architecture, archaeology, engineering, and culture. These resources contribute to an understanding of the historical and cultural foundations of the nation. The NRHP eligibility criteria are presented in 36 CFR Section 60.4.

4A.1.25 American Indian Religious Freedom Act

The American Indian Religious Freedom Act of 1978 protects the rights of Native Americans to freedom of expression of traditional religions (24 U.S.C. Section 1996). This act established "the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions… including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites."

4A.1.26 Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act provides a systematic process for determining the rights of lineal descendants and recognized Indian tribes and Native Hawaiian organizations to claim and recover Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony. Native American descendants, tribes, and organizations are to be consulted when such items are inadvertently discovered or intentionally excavated on Federal or tribal lands. Regulations in 43 CFR Part 10, Section 10.4, outline requirements for notification of inadvertent discoveries, ceasing activity, consultation, disposition of the items, and resumption of activity. The act also covers claims and recovery of Native American human remains and burial artifacts held by the Federal government or federally funded museums.

4A.1.27 Indian Trust Asset Policies

Indian trust assets (ITAs) are legal interests in property held in trust by the U.S. Government for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the U.S. is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the U.S. The characterization and application of the U.S. trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historical treaty provisions.

The Federal government, through treaty, statute, or regulation, may take on specific, enforceable fiduciary obligations that give rise to a trust responsibility to federally-recognized tribes and individual Indians possessing trust assets. Courts have recognized an enforceable Federal fiduciary duty with respect to Federal supervision of Indian money or natural resources, held in trust by the Federal government, where specific treaties, statutes or regulations create such a fiduciary duty.

Consistent with President William J. Clinton's 1994 memorandum, "Government-to-Government Relations with Native American Tribal Governments," Bureau of Reclamation (Reclamation) assesses the effect of its programs on tribal trust resources and federally-recognized tribal governments. Reclamation is tasked to actively engage federally-recognized tribal governments and consult with such tribes on government-to-government level when its actions affect ITAs (*Federal Register*, Vol. 59, No. 85, May 4, 1994, pages 22951–22952). The DOI Departmental Manual Part 512.2 ascribes the responsibility for ensuring protection of ITAs to the heads of bureaus and offices. DOI is required to carry out activities in a manner that protects ITAs and avoids adverse effects whenever possible.

4A.1.28 Indian Sacred Sites on Federal Land

EO 13007 provides that in managing Federal lands, each Federal agency with statutory or administrative responsibility for management of Federal lands shall, to the extent practicable and as permitted by law, accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners, and avoid adversely affecting the physical integrity of such sacred sites.

4A.1.29 Federal Policies and Regulations Related to Environmental Justice

4A.1.29.1 Executive Order 12898

EO 12898, issued by President Clinton in 1994, requires that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on

minority populations and low-income populations…." In his memorandum transmitting EO 12898 to Federal agencies, President Clinton further specified that, "each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act [NEPA] of 1969." Guidance on how to implement EO 12898 and conduct an Environmental Justice analysis has been issued by the President's Council on Environmental Quality.

4A.1.29.2 Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964 states that "No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title VI bars intentional discrimination, but also unjustified disparate impact discrimination resulting from policies and practices that are neutral on their face (i.e., there is no evidence of intentional discrimination) but have the effect of discrimination on protected groups.

4A.1.29.3 Council on Environmental Quality Guidance for Environmental Justice

The CEQ issued guidance in 1997 entitled "Environmental Justice: Guidance under the National Environmental Policy Act" that established the role of EO 12898 as it relates to actions subject to NEPA. The guidance also established the criteria for identifying environmental justice populations and how to consider the involvement of environmental justice groups throughout phases of the NEPA process.

4A.2 State Policies and Regulations

State policies and regulations presented in this appendix are related to requirements that affect surface water, biological, energy, agricultural, air quality and cultural resources. State policies and regulations that affect operations of the Central Valley Project and State Water Project are included in Appendix 3A, No Action Alternative: Central Valley Project and State Water Project Operations, and are not included in this appendix.

4A.2.1 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) established surface water and groundwater quality guidelines and provided the authority for the SWRCB to protect the state's surface water and groundwater. Nine RWQCBs have been established to oversee and implement specific water quality activities in their geographic jurisdictions.

The Porter-Cologne Act also requires that each RWQCB develop basin plans that establish and periodically review the beneficial uses and water quality objectives for groundwater and surface waterbodies within its jurisdiction. Water quality

objectives developed by the regional boards provide specific water quality guidelines to protect groundwater and surface water to maintain designated beneficial uses. The SWRCB, through its RWQCBs, is the permitting authority in California to administer NPDES permits and Waste Discharge Requirements permits for regulation of waste discharges in the respective jurisdictions.

4A.2.1.1 Regional Water Quality Control Board Basin Plans

The RWQCBs are required to formulate and adopt basin plans for all areas under their jurisdiction under the Porter-Cologne Act. Each basin plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the basin plans.

Section 13050(f) of the Porter-Cologne Act lists the beneficial uses of the waters of the state that may be protected against water quality degradation, which include but are not limited to: domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. Basin plans must designate and protect beneficial uses in the region. A uniform list of beneficial uses is defined by the SWRCB; however, each RWQCB may identify additional beneficial uses specific to local waterbodies.

Basin plans must adopt water quality standards to protect public health or welfare, enhance the quality of water, and serve the purposes of the CWA. These water quality standards include: designated beneficial uses; water quality objectives to protect the beneficial uses; implementation of the Federal and state policies for antidegradation; and general policies for application and implementation.

The basin plans are subject to modification, considering applicable laws, policies, technologies, water quality conditions, and priorities. Basin plans must be assessed every 3 years for the appropriateness of existing standards and evaluation and prioritization of basin planning issues. In California, however, waterbodies are assessed every 2 years for CWA 303(d) and 305(b) requirements. Revisions are accomplished through basin plan amendments. Once a basin plan amendment is adopted in noticed public hearings, it must be approved by the SWRCB Office of Administrative Law and, in some cases, the USEPA.

4A.2.1.2 State Antidegradation Policy

California's Antidegradation Policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Waters in California (State Water Board Resolution No. 68-16), restricts degradation of surface waters and groundwaters. In particular, this policy protects waterbodies where existing quality is higher than necessary for the protection of beneficial uses. Under the Antidegradation Policy, any actions that can adversely affect water quality in all surface waters and groundwaters must:

- Meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that a pollution or

nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the state will be maintained;

- Not unreasonably affect present and anticipated beneficial use of the water; and
- Not result in water quality less than that prescribed in water quality plans and policies.

The state Antidegradation Policy meets the requirements of the Federal antidegradation policy.

4A.2.1.3 California Toxics Standards

The Policy for Implementing Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California is referred to as the State Implementation Policy. This state policy for water quality control, adopted by the SWRCB on March 2, 2000, and effective by May 22, 2000, applies to discharges of toxic pollutants into the inland surface waters, enclosed bays, and estuaries of California subject to regulation under the State's Porter-Cologne Act (Division 7 of the Water Code) and the Federal CWA. Such regulation may occur through the issuance of NPDES permits, or other relevant regulatory approaches. The policy establishes: (1) implementation provisions for priority pollutant criteria promulgated by the USEPA through the National Toxics Rule (40 CFR 131.36) (promulgated on December 22, 1992, and amended on May 4, 1995) and through the California Toxics Rule (40 CFR 131.38) (promulgated on May 18, 2000, and amended on February 13, 2001), and for priority pollutant objectives established by RWQCBs in their water quality control plans; (2) monitoring requirements for 2,3,7,8-tetrachlorodibenzodioxin equivalents; and (3) chronic toxicity control provisions. In addition, this policy includes special provisions for certain types of discharges and factors that could affect the application of other provisions in the policy.

The California Toxics Rule is applicable to all state waters, as are the USEPA advisory National Recommended Water Quality Criteria. Central Valley and Delta areas are subject to the 2006 Bay-Delta Water Quality Control Plan, and the Central Valley, Tulare Basin, and San Francisco Bay regional plans. Freshwater criteria apply to waters of salinity less than 1 parts per thousand 95 percent or more of the time, seawater criteria are for water greater than 10 parts per thousand 95 percent or more of the time, and estuarine waters use the more stringent of the two possible criteria, in absence of estuary-specific criteria.

The regulation of mercury contamination is approached through bioaccumulation to fish. In addition to fish fillets protective of human health, the Delta TMDL recommended concentration for mercury in small, whole-body fish to be protective of wildlife is not to exceed 0.03 mg/kg mercury wet weight. Although selenium is regulated through water quality standards, fish and bird egg tissue concentration benchmarks have been developed for use in San Francisco Bay and Delta TMDLs.

For evaluation of risks to human health, analyses of fish fillets are most common and were used in California to establish Fish Contaminant Goals and Advisory Tissue Levels, although the fish should be analyzed in the form that people may eat (for example, for some species or ethnic groups, whole-body analyses may be appropriate).

4A.2.1.4 Long-term Irrigated Lands Regulatory Program

The SWRCB and the RWQCBs implement the Irrigated Lands Regulatory Program to regulate discharges to prevent agricultural runoff from impairing surface waters. To protect these waters, the SWRCB and the RWQCBs issue conditional waivers of waste discharge requirements to growers that contain conditions requiring water quality monitoring of receiving waters and corrective actions when impairments are found.

4A.2.1.5 Nonpoint Source Implementation and Enforcement Policy

California's Nonpoint Source Implementation and Enforcement Policy describes how its nonpoint source plan is to be implemented and enforced, in compliance with Section 319 of the CWA, Coastal Zone Act Reauthorization Amendments, and the Porter-Cologne Act. In contrast to point-source pollution that enters waterbodies from discrete conveyances, nonpoint-source pollution enters waterbodies from diffuse sources, such as land runoff, seepage, or hydrologic modification. Nonpoint-source pollution is controlled through implementation of management measures. The nonpoint source program contains recommended management measures for developing areas and construction sites, as well as wetland and riparian areas. Requirements for soil erosion and sediment controls to prevent nonpoint-source sediment discharges to waterways may be incorporated into permits issued by the San Francisco Bay Conservation and Development Commission or other regulatory entities.

4A.2.1.6 California 303(d)/305(b) Integrated Report

The California 303(d)/305(b) Integrated Report is updated biennially, as required by the USEPA, for inclusion in the USEPA's national Water Quality Inventory Report to Congress. The report is composed of the current California 303(d) list and all current listing decisions for contaminants in impaired waterbodies. The statewide report is the compilation of 303(d)/305(b) Integrated Reports submitted by each RWQCB. The final California 303(d) list must be submitted to and approved by the USEPA before it becomes effective.

4A.2.1.7 Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS)

In 2006, the Central Valley RWQCB, the SWRCB, and stakeholders began a joint effort to address salinity and nitrate problems in California's Central Valley and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. This effort is referred to as the CV-SALTS Initiative. The goal of CV-SALTS is to develop a comprehensive region-wide Salt and Nitrate Management Plan (SNMP) describing a water quality protection strategy that will be implemented through a mix of voluntary and regulatory efforts. The SNMP

may include recommendations for numeric water quality objectives, beneficial use designation refinements, and/or other refinements, enhancements, or basin plan revisions. The SNMP will serve as the basis for amendments to the three basin plans that cover the Central Valley Region (the Sacramento River and San Joaquin River Basin Plan, the Tulare Lake Basin Plan, and the Sacramento/San Joaquin Rivers Bay-Delta Plan). The Basin Plan Amendments will likely establish a comprehensive implementation plan to achieve water quality objectives for salinity (including nitrate) in the region's surface waters and groundwater, and the SNMP may include recommendations for numeric water quality objectives, beneficial use designation refinements, and/or other refinements, enhancements, or basin plan revisions.

4A.2.2 California Safe Drinking Water Act

In 1976, California enacted its own Safe Drinking Water Act, requiring the Department of Public Health Services to regulate drinking water, including setting and enforcing Federal and state drinking water standards, administering water quality testing programs, and administering permits for public water system operations. The Federal Safe Drinking Water Act allows the state to enforce its own standards in lieu of the Federal standards so long as they are at least as protective as the Federal standards. Substantial amendments to the California Act in 1989 incorporated the new Federal Safe Drinking Water Act requirements into California law, provided for the state to set more stringent standards, and recommended public health levels for contaminants

4A.2.2.1 Central Valley Regional Water Quality Control Board Drinking Water Policy

A multi-year effort is underway to develop a drinking water policy for surface waters in the Central Valley. As water flows out of the Sierra foothills and into the valley, pollutants from a variety of urban, industrial, agricultural, and natural sources affect the quality of water, which leads to drinking water treatment challenges and potential public health concerns. Existing policies and plans lack water quality objectives for several known drinking water constituents of concern, such as disinfection byproduct precursors and pathogens, and do not include implementation strategies to provide effective source water protection. The Central Valley RWQCB committed to development of the Policy in Resolution R5-2004-0091 and later in Resolution R5-2010-0079. The 2010 Resolution also documented progress to date, provided direction for future actions and set deadlines for interim deliverables associated with policy development by July 2013.

4A.2.3 Area of Origin Groundwater Statute

California Water Code 1220 prohibits the pumping of groundwater "for export within the combined Sacramento and Delta–Central Sierra Basins…unless the pumping is in compliance with a groundwater management plan that is adopted by [county] ordinance." The statute enables, but does not require, the board of supervisors of any county within any part of the combined Sacramento and Delta–Central Sierra Basin to adopt groundwater management plans (GWMPs).

4A.2.4 Groundwater Management Act

Assembly Bill (AB) 3030 (1992, California Water Code sections 10750–10756) enables water agencies to develop and implement GWMPs to manage the groundwater resources in the jurisdiction of the participating parties. The state does not maintain a statewide program or mandate its implementation, but the legislation provides the guidelines and common framework through which groundwater management can be implemented. Groundwater management legislation was amended in 2002 with the passage of Senate Bill (SB) 1938, which provided additional groundwater management components supporting eligibility to obtain public funding for groundwater projects. In 2000, AB 3030 enabled the development of the Local Groundwater Assistance grant program to support local water agencies developing groundwater management programs.

4A.2.5 Groundwater Basin Adjudication Processes

Basin adjudications occur through a court decision at the end of a lawsuit. The final court decision determines the groundwater rights of all the groundwater users overlying the basin. In addition, the court decides who the extractors are and how much groundwater those well owners are allowed to extract, and appoints a Watermaster whose role is to ensure that the basin is managed in accordance with the court's decree. The Watermaster must report periodically to the court. There are currently 23 adjudicated groundwater basins in California, most of which are located in Southern California.

4A.2.6 California Statewide Groundwater Elevation Monitoring Program

SBX7 6, enacted in November 2009, mandates a statewide groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California's groundwater basins. This amendment to the Water Code requires the collaboration between local monitoring entities and Department of Water Resources (DWR) to collect groundwater elevation data. To achieve this goal, DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) Program to establish a permanent, locally managed program of regular and systematic monitoring in all of the state's alluvial groundwater basins.

The law requires that local agencies monitor and report the elevation of their groundwater basins. DWR is required by the law to establish a priority schedule for monitoring groundwater basins, and to report to the Legislature on the findings from these investigations (Water Code Section 10920 et seq.). DWR is developing an online system for a monitoring entity to submit groundwater elevation data, which will be compatible with DWR's Water Data Library.

4A.2.7 Sustainable Groundwater Management Act

In September 2014, the Sustainable Groundwater Management Act (SGMA) was enacted. The SGMA establishes a new structure for locally managing California's groundwater in addition to existing groundwater management

provisions established by AB 3030 (1992), SB 1938 (2002), and AB 359 (2011), as well as SBX7 6 (2009).

The SGMA includes the following key elements:

- Provides for the establishment of a Groundwater Sustainability Agency (GSA) by one or more local agencies overlying a designated groundwater basin or subbasin, as established by DWR Bulletin 118-03.
- Requires all groundwater basins found to be of "high" or "medium" priority to prepare Groundwater Sustainability Plans (GSPs).
- Provides for the proposed revisions, by local agencies, to the boundaries of a DWR Bulletin 118 basin, including the establishment of new subbasins.
- Provides authority for DWR to adopt regulations to evaluate GSPs, and review the GSPs for compliance every 5 years.
- Requires DWR to establish best management practices and technical measures for GSAs to develop and implement GSPs.
- Provides regulatory authorities for the SWRCB for developing and implementing interim GWMPs under certain circumstances (such as lack of compliance with development of GSPs by GSAs).

The SGMA defines sustainable groundwater management as "the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results." Undesirable results are defined as any of the following effects.

- Chronic lowering of groundwater levels (not including overdraft during a drought if a basin is otherwise managed).
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- Significant and unreasonable land subsidence that substantially interferes with surface land uses.
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

The SGMA requires the formation of GSPs in groundwater basins or subbasins that DWR designates as medium or high priority based upon groundwater conditions identified using the CASGEM results by 2022. Sustainable groundwater operations must be achieved within 20 years following completion of the GSPs.

4A.2.8 California Endangered Species Act

California Fish and Game Code sections 2050–2115.5, otherwise known as the California Endangered Species Act (CESA), state that all native species of fish, wildlife, and plants that are in danger of or threatened with extinction because their habitats are threatened with destruction, adverse modification, or severe curtailment, or because of overexploitation, disease, predation, or other factors, are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. The CESA also states that the conservation, protection, and enhancement of these species and their habitat is of statewide concern (Fish and Game Code Section 2051).

An "Endangered" species is a native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish and Game Code Section 2062). A "threatened" species is a native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not currently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts (Fish and Game Code Section 2067). The California Fish and Game Commission is responsible for listing species under CESA, and the California Department of Fish and Wildlife (DFW) is responsible for implementing and enforcing and issuing permits under CESA.

CESA strictly prohibits the "take" of any threatened or endangered fish, wildlife or plant species or species listed as threatened or endangered under CESA. Under Section 2081 of the Fish and Game Code, an incidental take permit from DFW is required for projects that could result in the "take" of a species that is state-listed as threatened or endangered, or that is a candidate for listing. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass," as the definition of ESA does. As a result, the threshold for take under CESA may be higher than under the ESA.

Under Fish and Game Code Section 2080.1, applicants can notify DFW that they have been issued an incidental take statement/permit pursuant to the ESA for species that are listed under both the ESA and CESA, and can request a consistency determination. If DFW determines that the conditions specified in the Federal incidental take statement/permit are consistent with CESA, a consistency determination can be issued, which allows for incidental take under CESA under the same provisions as under the Federal incidental take statement/permit.

4A.2.9 Natural Community Conservation Planning Act

Sections 2800–2835 of the Fish and Game Code, otherwise known as the Natural Community Conservation Planning Act (NCCP Act), detail the state's policies on the conservation, protection, restoration, and enhancement of the state's natural resources and ecosystems. The intent of the legislation is to provide for conservation planning as an officially recognized policy that can be used as a

tool to eliminate conflicts between the protection of the state's natural resources and the need for growth and development. In addition, the legislation promotes conservation planning as a means of coordination and cooperation among private interests, agencies, and landowners, and as a mechanism for multi-species and multi-habitat management. The NCCP Act provides an alternative means for DFW to authorize the incidental take of species listed as threatened or endangered or which are candidates for listing under CESA.

4A.2.10 California Fish and Game Code Section 1600 (Streambed Alterations)

Sections 1600–1616 of the Fish and Game Code state that it is unlawful for any person or agency to (1) substantially divert or obstruct the natural flow of the bed, channel, or bank of any river, stream, or lake; (2) substantially change the bed, channel, or bank of any river, stream, or lake; (3) use any material from the bed, channel, or bank of any river, stream, or lake; or (4) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake in California, without first notifying DFW. With certain exceptions, a Streambed Alteration Agreement must be obtained if DFW determines that substantial adverse effects on existing fish and wildlife resources are expected to occur. The Streambed Alteration Agreement must include measures designed to protect the affected fish and wildlife and associated riparian resources. The regulatory definition of a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks, and that body of water supports wildlife, fish, or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. DFW's jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife.

4A.2.11 California Wild and Scenic Rivers Act

In addition to the National Wild and Scenic Rivers System, California has its own system of protected rivers. The California Wild and Scenic Rivers System consists of rivers and river segments established by legislative action because of the scenic, recreational, fishery, or wildlife values that the rivers or segments possess in their free-flowing condition. Sections 5093.50–5093.70 of the Public Resources Code, as established by the Wild and Scenic Rivers Act in 1972, with amendments, state that: "It is the policy of the State of California that certain rivers which possess extraordinary scenic, recreational, fishery, or wildlife values will be preserved in their free-flowing state, together with their immediate environments, for the benefit and enjoyment of the people of the state." The California Natural Resources Agency must coordinate activities involving the State Wild and Scenic Rivers with Federal, state, and local agencies.

All rivers designated as wild, scenic, or recreational by the Federal or state government are regarded as having high scenic quality. The Lower American River, from Nimbus Dam to the Sacramento River, and portions of the Trinity River, downstream of Lewiston Dam, have been designated under both the National and California Wild and Scenic Rivers Systems. The Lower American

River is listed by the California Natural Resources Agency as "recreational," with trail, boating, rafting, and fishing opportunities. The Trinity River downstream of Lewiston Dam is also listed by California as "recreational," offering fishing, rafting, kayaking, and canoeing.

4A.2.12 Heritage and Wild Trout Program

The California Fish and Game Commission established the Heritage and Wild Trout Program in 1971 to protect and enhance high quality wild strains of trout and their habitat. The program designates waters that are managed to protect the wild strains of trout. Generally, these areas are available for public fishing without overcrowding and are able to support naturally sustainable trout populations to allow for appropriate levels of fishing. Management plans are prepared for the designated wild trout waters to avoid planting of domestic strains of catchable-sized trout and minimize the potential for planting of hatchery-produced trout.

4A.2.13 The Salmon, Steelhead Trout, and Anadromous Fisheries Program Act

The Salmon, Steelhead Trout, and Anadromous Fisheries Program Act (Fish and Game Code Section 6900-6903.5) was enacted in 1988 in response to DFW reporting that the natural production of salmon and steelhead in California had declined dramatically since the 1940s, primarily as a result of lost stream habitat on many streams in the state. The Salmon, Steelhead Trout, and Anadromous Fisheries Program Act declares that it is the policy of the State of California to increase the state's salmon and steelhead resources, and directs DFW to develop a plan and program that strives to double the salmon and steelhead resources (Fish and Game Code Section 6902(a)). It is also the policy of the state that existing natural salmon and steelhead habitat shall not be diminished further without offsetting the impacts of lost habitat (Fish and Game Code Section 6902(c)).

4A.2.14 Marine Invasive Species Act

The Marine Invasive Species Act of 2003 (AB 433) revised and expanded the Ballast Water Management for Control of Nonindigenous Species Act of 1999 to more effectively address the threat of nonindigenous species introductions. The law charged the California State Lands Commission with oversight of the state's program to prevent or minimize the introduction of nonindigenous species from commercial vessels. The current State Lands Commission regulations provide vessel owners with various options for managing ballast water, including retention, exchange in mid-ocean waters, treatment, or discharge at the same location where the ballast water originated.

4A.2.15 California Aquatic Invasive Species Management Plan

Developed by the DFW Invasive Species Program, the California Aquatic Invasive Species Management Plan provides information that state agencies and other entities can use to collaborate on addressing aquatic invasive species. The plan proposes management actions for addressing aquatic invasive species threats to the state of California. It focuses on the nonnative algae, crabs, clams, fish,

plants, and other species that continue to invade California's creeks, wetlands, rivers, bays, and coastal waters. The plan has the following eight major objectives.

- Improve coordination and collaboration among the people, agencies, and activities involved with aquatic invasive species.
- Minimize and prevent the introduction and spread of aquatic invasive species into and throughout the waters of California.
- Develop and maintain programs that ensure the early detection of new aquatic invasive species and the monitoring of existing aquatic invasive species.
- Establish and manage systems for rapid response and eradication.
- Control the spread of aquatic invasive species and minimize their impacts on native habitats and species.
- Increase education and outreach efforts to ensure awareness of aquatic invasive species threats and management priorities throughout California.
- Increase research on the baseline biology of aquatic invasive species, the ecological and economic impacts of invasions, and control options to improve management.
- Ensure state laws and regulations promote the prevention and management of aquatic invasive species introductions.

Each objective is supported by a series of strategic actions. The plan meets Federal requirements to develop statewide Nonindigenous Aquatic Nuisance Species Management Plans under Section 1204 of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (amended as the National Invasive Species Act of 1996). Article 2, Section 64, of the Harbors and Navigation Code authorizes the California Department of Boating and Waterways to manage aquatic weeds impeding the navigation and use of state waterways.

4A.2.16 California Fish and Game Code—Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code codify the Native Plant Protection Act of 1977 (NPPA), which is intended to preserve, protect, and enhance endangered or rare native plants in the state. Under Section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare when, although not threatened with immediate extinction, it is present in such small numbers throughout its range that it may become endangered if its environment worsens. The California Fish and Game Commission has the authority to designate native plants as "endangered" or "rare," and DFW has authority to implement and enforce the NPPA. Like CESA, the NPPA strictly prohibits the take of endangered and rare plant species. However, the NPPA contains certain exceptions to this take prohibition that are not included within CESA.

DFW maintains a Special Vascular Plants, Bryophytes, and Lichens List for California as part of the California Natural Diversity Database. The list is updated quarterly and is reviewed and updated by rare plant status review groups (more than 300 botanical experts from government, academia, nongovernment organizations, and the private sector) managed jointly by DFW and California Native Plant Society (CNPS). Plant species, subspecies, or varieties are assigned a California Rare Plant Rank (CRPR) based on their level of endangerment. Plants with CRPR 1A, 1B, or 2 meet the definitions of Section 1901 of the Fish and Game Code and may qualify for state listing. For plants with a CRPR 3 rank, DFW and CNPS lack sufficient information to assign them another code. CRPR 4 plants are those of limited distribution and/or those that are infrequently found within a broader range in California. CNPS believes that CNPR 3 and 4 plants are uncommon enough to justify their regular monitoring.

4A.2.17 California Fish and Game Code—Fully Protected Species

Sections 3505, 3511, 3513, 3800, 4700, 5050, and 5515 of the Fish and Game Code pertain to fully protected wildlife species (birds in Sections 3505 through 3800, mammals in Section 4700, reptiles and amphibians in Section 5050, and fish in Section 5515) and strictly prohibit the take of fully protected species. With certain narrow exceptions, DFW cannot issue a take permit for fully protected species; therefore, avoidance measures may be required to avoid take.

4A.2.18 California Energy Commission

California's primary energy policy and planning agency, the California Energy Commission, was created by the Legislature (the Warren-Alquist Act) in 1974. The California Energy Commission forecasts future energy needs, promotes energy efficiency and conservation by setting the state's appliance and building efficiency standards; supports public interest energy research; develops renewable energy resources and alternative renewable energy technologies for buildings, industry, and transportation; licenses thermal power plants that are 50 megawatts or larger; and plans and directs state response to energy emergencies.

4A.2.19 California Department of Conservation

The California Department of Conservation administers policies to promote environmental health, economic vitality, informed land use decisions, and management of the state's natural resources, including agricultural resources. One of the programs is implemented in accordance with the Williamson Act to discourage conversion of agricultural land to non-agricultural use by offering landowners tax incentives for entering into a minimum 10-year contract to preserve no less than 100 acres of agricultural land.

As part of the Land Inventory and Monitoring program, definitions were established for designations of Important Farmlands which include Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. Farmland maps are created by the Farmland Mapping and Monitoring Program under the direction of the USDA. Prime Farmland is defined by soil quality, groundwater elevation, water supplies, flooding, erodibility,

permeability, rock fragment content, and rooting depth to produce sustained high crop yields. Farmland of Statewide Importance includes lands not designated as Prime Farmland that have a good combination of most of the physical and chemical characteristics for the production of crops. Unique Farmland includes particular characteristics for high quality and/or high yield of a specific crop (e.g., rice).

4A.2.20 Delta Protection Act of 1992

The Delta Protection Act (Public Resources Code Section 21080.22) includes a series of findings and declarations related to the quality of the Delta environment and emphasizes the national, state, and local importance of protecting the unique resources of the Delta. The act mandated a state-level planning effort to address the needs of Delta communities. The Delta Protection Commission (DPC) was made a permanent state agency in 2000 because a need for continued planning and management was identified. The DPC has planning jurisdiction over portions of five counties: Contra Costa, Sacramento, San Joaquin, Solano, and Yolo. It was charged with developing a comprehensive regional plan to guide land use and resource management, including wildlife habitat and recreation. The resulting Land Use and Resource Management Plan for the Primary Zone of the Delta was initially adopted by the DPC in February 1995 and updated in November 2010. The plan has eight policy areas: Environment, Utilities and Infrastructure, Land Use and Development, Water and Levees, Agriculture, Recreation and Access, Marine Patrol, and Boater Education and Safety Programs. With the adoption of the management plan, all local governments with incorporated areas in the Delta Primary Zone must submit proposed amendments to their general plans to the DPC. The DPC then reviews the proposed amendments to ensure they are consistent with the Land Use and Resource Management Plan for the Primary Zone of the Delta.

4A.2.21 Sacramento-San Joaquin Delta Reform Act of 2009

In November 2009, the California Legislature enacted SBX7 1, one of several bills passed at that time related to water supply reliability, ecosystem health, and the Delta. SBX7 1 took effect on February 3, 2010. Division 35 of this legislation, also known as the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act), requires the development of a legally enforceable, comprehensive, long-term management plan for the Delta, referred to as the Delta Plan. The Delta Stewardship Council was established as an independent state agency by the Delta Reform Act.

The Delta Stewardship Council's primary responsibility is to develop, adopt, and implement the Delta Plan, a legally enforceable, comprehensive, long-term management plan for the Delta and the Suisun Marsh that achieves the coequal goals (Water Code Section 85300(a)) of (1) providing a more reliable water supply for California and (2) protecting, restoring and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place (Water Code Section 85054).

Achieving the coequal goals is a primary and fundamental purpose of the Delta Plan. Additionally, the Delta Reform Act (Water Code Section 85020 et seq.) states that the policy of the state is "to achieve the following objectives as inherent in the coequal goals for the management of the Delta:

- Manage the Delta's water and environmental resources and the water resources of the state over the long term.
- Protect and enhance the unique cultural, recreational, and agricultural values of the California Delta as an evolving place.
- Restore the Delta ecosystem, including its fisheries and wildlife, as the heart of a healthy estuary and wetland ecosystem.
- Promote statewide water conservation, water use efficiency, and sustainable water use.
- Improve water quality to protect human health and the environment consistent with achieving water quality objectives in the Delta.
- Improve the water conveyance system and expand statewide water storage.
- Reduce risks to people, property, and state interests in the Delta by effective emergency preparedness, appropriate land uses, and investments in flood protection.
- Establish a new governance structure with the authority, responsibility, accountability, scientific support, and adequate and secure funding to achieve these objectives."

4A.2.22 McAteer-Petris Act and the San Francisco Bay Plan

The McAteer-Petris Act, enacted on September 17, 1965, was designed to preserve San Francisco Bay from indiscriminate filling and established the San Francisco Bay Conservation and Development Commission (BCDC) as a temporary state agency charged with preparing a plan for the long-term use of the bay and regulating development in and around the bay. To this end, BCDC prepared the San Francisco Bay Plan. In August 1969, the McAteer-Petris Act was amended to make BCDC a permanent agency and to incorporate the policies of the San Francisco Bay Plan into state law. Bay Plan maps and policies guide the protection of the San Francisco Bay and its tributary waterways, marshes, managed wetlands, salt ponds, and shoreline. Plan maps identify areas designated for "priority uses" that include wildlife refuges, waterfront parks, beaches, water-related industry, and ports. The Bay Plan also identifies other land designations, such as tidal marshes, salt ponds, and managed wetlands.

BCDC's Suisun Marsh Protection Plan contains findings that recognize the value of the aesthetic resources of the Suisun Marsh, as well as adjacent upland grasslands, cultivated areas, and seasonal marshes. The plan is intended "to preserve the integrity and assure continued wildlife use" and establishes that the Suisun Marsh "represents a unique and irreplaceable resource to the people of the state and nation." The plan includes specific building and landscape criteria for

development along the eastern boundary of the Suisun Marsh in southern Solano County.

4A.2.23 State Lands Commission

The California State Lands Commission (SLC) was established in 1938 with authority under Division 6 of the California Public Resources Code. The SLC provides stewardship of the California lands and waterways entrusted to its care. Nearly 4 million acres of "sovereign lands" are owned by the state. This includes the beds of navigable streams, rivers, and lakes, tidal waterways, and tidelands up to the ordinary high water mark and submerged lands along the coastline extending from the shoreline out to 3 miles offshore. SLC may lease sovereign lands for any public trust purpose, including open space, fisheries, commerce, recreation, and navigation. A public or private entity must lease sites for marinas and recreational piers that are within sovereign lands. SLC also issues permits for dredging lands within its jurisdiction.

4A.2.24 California Mulford-Carrell Act

The 1969 Mulford-Carrell Act established the California Air Resources Board (ARB). The ARB's mission is to promote and protect public health, welfare, and ecological resources through improved air quality. The ARB oversees the activities of local and regional air quality districts.

4A.2.25 California Clean Air Act

The California Clean Air Act (CCAA) provides the state with a comprehensive framework for air quality planning regulation. Prior to passage of the act, Federal law contained the only comprehensive planning framework. The CCAA requires attainment of state ambient air quality standards by the earliest practicable date.

4A.2.25.1 California Ambient Air Quality Standards and State Air Quality Designations

The ARB administers air quality policy in California, establishes statewide standards, and administers the state's mobile-source emissions control program, which is described below. In addition, the ARB oversees air quality programs established by state statute. The ARB oversees programs to achieve the California Ambient Air Quality Standards (CAAQS), which were established in 1969 pursuant to the Mulford-Carrell Act. These standards are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility-reducing particulates, hydrogen sulfide, and sulfates.

4A.2.25.2 State Implementation Plans

Federal clean air laws require nonattainment areas with unhealthy levels of criteria air pollutants to develop plans to detail actions that will be undertaken to achieve the NAAQS. These comprehensive plans are known as State Implementation Plans, or SIPs. In addition, the CCAA requires local air districts in nonattainment areas of the state to prepare and maintain Air Quality Management Plans (AQMPs) to achieve compliance with CAAQS. These

AQMPs also serve as a basis for preparing the SIP for the state of California, which must ultimately be approved by the USEPA and codified in the CFR.

SIPs are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and Federal control requirements. Many of California's SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel standards and requirements, and limits on emissions from consumer products. State law establishes the ARB as the lead agency for all purposes related to the SIP. Local air districts and other agencies, such as the Bureau of Automotive Repair, prepare SIP elements and submit them to the ARB for review and approval. The ARB forwards SIP revisions to the USEPA for approval and publication in the *Federal Register*. CFR Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all the items included in the California SIP. The promulgation of the new national 8-hour ozone standard and $PM_{2.5}$ standards has resulted in additional statewide air quality planning efforts. The California Regional Haze Plan has been drafted to reduce regional haze and improve visibility in national parks and wilderness areas. Many additional California SIP submittals are pending USEPA approval.

In addition to the SIPs aimed at attainment of the NAAQS, the CCAA requires nonattainment areas to achieve and maintain the CAAQS by the earliest practicable date. Local air districts must develop plans to attain the state ozone, CO, sulfur dioxide, and NO_2 standards. The CCAA also requires that, by the end of 1994 and once every 3 years thereafter, the local air districts must assess their progress toward attaining the air quality standards. The triennial assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding 3-year period. The districts must review and revise their attainment plans, if necessary, to correct for deficiencies in meeting progress, incorporate new data or projections, mitigate ozone transport, and expedite adoption of all feasible control measures. In addition to the triennial progress assessment requirement, local air districts must prepare an annual progress report and submit the report to the ARB by December 31 of each year. At a minimum, the annual progress report contains the proposed and actual dates for the adoption and implementation of each measure listed in the previous 3-year plan.

4A.2.25.3 Air Toxics Programs

In addition to the criteria pollutants, concern about non-criteria pollutants has increased in recent years. AB 1807 (the Tanner Bill, passed in 1983) established the California Air Toxics Program for identifying and developing emissions control and reduction methods for toxic air contaminants (TACs). The bill formally designated 18 substances as TACs. In 1993, the 189 HAPs identified by the USEPA were incorporated into California law as TACs. Other pollutants have been added more recently, such as PM emissions from diesel-fueled engines (diesel PM), designated by California as a carcinogen. The California Air Toxics Program also includes provisions for public awareness and risk reduction.

Local agencies, such as air districts, are responsible for evaluating and controlling TAC emissions, especially when these emissions are released from projects near sensitive receptors. For example, AB 3205 requires that new or modified sources of TACs near schools provide public notice to the parents of schoolchildren before a permit to emit air pollutants is issued. One air toxics control measure adopted by ARB in 2004 prohibited operation of diesel-fueled backup engines within 500 feet of a school during school hours, unless used in an emergency.

The Air Toxics "Hot Spots" Information and Assessment Act was enacted in September 1987. The act requires that toxic air emissions from stationary sources (facilities) be quantified and compiled into an inventory, that risk assessments be conducted according to methods developed by the California Office of Environmental Health Hazard Assessment, and that the public be notified of significant risks posed by nearby facilities. Facilities that pose a potentially significant health risk to the public are required to reduce their risks.

4A.2.25.4 Mobile-Source Emission Control Programs

The ARB is responsible for developing statewide programs and strategies to reduce the emission of smog-forming pollutants and TACs by mobile sources. To attain the CAAQS, the CCAA mandates that the ARB achieve the maximum degree of emission reductions from all on- and off-road mobile sources. On-road sources include passenger cars, motorcycles, trucks, and buses; off-road sources include heavy-duty construction equipment, recreational vehicles, marine vessels, lawn and garden equipment, and small utility engines. On-road vehicle emission control programs overseen by the ARB include vehicle inspections, idling restrictions, requirements for clean vehicle fleets, voluntary vehicle retirement programs, and engine emissions standards.

Additionally, exhaust emission standards have been adopted by the ARB and the USEPA for off-road engines. The ARB has extensive statewide programs underway to reduce diesel PM.

4A.2.26 State Policies and Regulations Related to Greenhouse Gas Emissions

A summary of state regulations and standards related to GHG emissions is provided below. California Senate and Assembly bills and executive orders, such as SB 1771, AB 1493, SB 1078, SB 107, EOs S-14-08 and S-1-07, SB 1368, SB 97, and SB 375 have been developed to define various aspects of GHG recordkeeping and implementation of GHG emission reduction measures, such as the California Renewables Portfolio Standard Program for statewide energy supplies and the Low Carbon Fuel Standard. These bills and orders are not discussed further in this document because they are not directly applicable to the Proposed Project or any of the alternatives. Other bills, executive orders, and plans, such as AB 32, EO S 3-05, the Climate Change Scoping Plan, the Climate Change Adaptation Strategy, and California Environmental Quality Act (CEQA) guidance, are discussed further. These bills and plans generally define the regulatory setting for projects that emit GHGs in California and describe

regulatory agency goals for statewide GHG emissions reductions and climate change adaptation.

4A.2.26.1 Executive Order S-3-05 (California)

EO S-3-05 was signed into law in 2005 and calls for a reduction of GHG emissions to 2000 levels by 2010, a reduction of GHG emissions to 1990 levels by 2020, and a reduction of GHG emissions to 80 percent below 1990 levels by 2050. The order directs the California Environmental Protection Agency (CalEPA) Secretary to coordinate development and implementation of strategies to achieve the GHG reduction targets in conjunction with the Secretary of the Business, Transportation, and Housing Agency; the Secretary of the Department of Food and Agriculture; the Secretary of the Natural Resources Agency; the Chairperson of ARB; the Chairperson of the California Energy Commission; and the President of the California Public Utilities Commission. CalEPA developed the Climate Action Team made up of representatives from the agencies listed above to implement the strategies to reduce GHG emissions. The order also includes a requirement for CalEPA to report annually to the Governor and Legislature. The first report, Climate Action Team Proposed Early Actions to Mitigate Climate Change in California, was released in March 2006, and reports have been published each year since. ARB released its Expanded List of Early Action Measures in October 2007.

4A.2.26.2 California Global Warming Solutions Act of 2006 (Assembly Bill 32)

On September 20, 2006, California adopted the California Global Warming Solutions Act of 2006 (generally referred to as AB 32 and codified at Section 1, Division 25.5, and Section 38500 et seq. of the California Health & Safety Code). This law requires ARB to design and implement emission limits, regulations, and other measures such that statewide GHG emissions are reduced in a technologically feasible and cost-effective manner to 1990 levels by 2020 (representing a 25 percent reduction). AB 32 does not directly amend other environmental laws, such as CEQA. Instead, it creates a program to identify GHG sources, prioritize sources for regulation based on significance of contributions to California GHG emissions, and regulate priority sources. Under AB 32, ARB is required to complete certain actions. As of May 2012, ARB has:

- Determined that the statewide GHG emissions inventory in 1990 was approved as a statewide GHG emissions limit to be achieved by 2020.
- Identified significant sources or categories of sources of each GHG and established protocols and procedures for monitoring, quantifying, and reporting such emissions.
- Issued a scoping plan to achieve emission reductions from specific sources or categories of sources by January 1, 2009.
- Adopted and begun enforcement of regulations to implement a suite of discrete actions by January 1, 2010.

- Adopted GHG emissions limits and reduction measures by January 1, 2011.
- Enforced GHG emission limits and reduction measures, beginning on January 1, 2012.

California lead agencies have relied upon local air pollution control districts to provide guidance on the evaluation of air pollutants under CEQA. As a result of AB 32, both ARB and the local air districts will have regulatory jurisdiction over GHG emissions in California. AB 32 identifies ARB as the state agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet targets.

In December 2007, ARB approved the 2020 emission limit (1990 level) of 427 million tpy CO2e of GHGs. The 2020 target requires the reduction of 169 million tpy CO2e, or approximately 30 percent below the state's projected "business-as-usual" 2020 emissions of 596 million tpy CO2e.

4A.2.26.3 Climate Change Scoping Plan

On December 11, 2008, pursuant to AB 32, ARB adopted the Climate Change Scoping Plan. This plan outlines how emissions reductions will be achieved from significant sources of GHGs via regulations, market mechanisms, and other actions. Six key elements, outlined in the scoping plan, are identified to achieve emissions reduction targets:

- Expand and strengthen existing energy efficiency programs and building and appliance standards;
- Achieve a statewide renewable energy mix of 33 percent;
- Develop a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establish targets for transportation-related GHG emissions for regions throughout California, and pursue policies and incentives to achieve those targets;
- Adopt and implement measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Create targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

The Climate Change Scoping Plan also recommended 39 measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures also put the state on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels. In 2011, the Functional Equivalent Document for the Scoping Plan was amended.

The Scoping Plan was reapproved by the ARB on August 24, 2011, including the Final Supplement to the Functional Equivalent Document. According to the Final Supplement, the majority of additional measures in the Climate Change Scoping Plan were adopted (as of 2012) and are currently in place.

4A.2.26.4 Executive Order S-13-08, Climate Change Adaptation Strategy

EO S-13-08, issued November 14, 2008, directs the California Natural Resources Agency, DWR, Office of Planning and Research, California Energy Commission, SWRCB, State Parks Department, and California's coastal management agencies to participate in a number of planning and research activities to advance California's ability to adapt to the impacts of climate change. The order specifically directs agencies to work with the National Academy of Sciences to initiate the first California Sea Level Rise Assessment and to review and update the assessment every 2 years after completion, immediately assess the vulnerability of the California transportation system to sea level rise, and to develop a California Climate Change Adaptation Strategy.

Prepared in cooperation and partnership with multiple state agencies, the 2009 California Climate Adaptation Strategy summarizes the best known science on climate change impacts in seven specific sectors (public health, biodiversity and habitat, ocean and coastal resources, water management, agriculture, forestry, and transportation and energy infrastructure) and provides recommendations on how to manage those threats.

4A.2.26.5 California Greenhouse Gas Cap-and-Trade Program

On October 20, 2011, ARB adopted the final cap-and-trade program for California. The California cap-and-trade program creates a market-based system with an overall emissions limit for affected sectors. The program is currently proposed to regulate more than 85 percent of California's emissions and will stagger compliance requirements according to the following schedule: (1) electricity generation and large industrial sources by 2012; and (2) fuel combustion and transportation by 2015.

4A.2.27 California Register of Historical Resources

The California Register of Historical Resources (CRHR) includes resources that are listed in or formally determined eligible for listing in the NRHP and some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (California Public Resources Code Section 5024.1; Title 14, California Code of Regulations Section 4850). The eligibility criteria for listing in the CRHR are similar to those for NRHP listing but focus on the relevance of the resources to California history and heritage. A cultural resource may be eligible for listing in the CRHR if it has significance under one or more of the following criteria:

- Associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- Associated with the lives of persons important to local, California, or national history.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values.
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

To be eligible, a resource must also have integrity. The CRHR definition of "integrity" is slightly different than that for the NRHP. Integrity is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The Office of Historic Preservation guidance further states that eligible resources must "retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance" and lists the same seven aspects of integrity used for evaluating properties under the NRHP criteria. The CRHR's special considerations for certain property types are limited to: (1) moved buildings, structures, or objects; (2) historical resources achieving significance within the past 50 years; and (3) reconstructed buildings (14 California Code of Regulations Section 4852).

4A.2.28 Native American Heritage Commission

The duties and role of the Native American Heritage Commission (NAHC), which is located in Sacramento, are described in Public Resources Code (PRC) sections 5097.9 through 5097.991. State and local agencies are required by the PRC to cooperate with the NAHC regarding disposition of Native American resources.

The NAHC maintains a catalog of places of special religious or social significance to Native Americans. This database, known as the Sacred Lands File, includes information on known Native American graves and cemeteries on private lands and other places of cultural or religious significance to the Native American community.

The NAHC also performs other duties regarding the preservation and accessibility of sacred sites and burials and the disposition of Native American human remains and burial items as described below.

4A.2.29 California Public Resources Code and California Health and Safety Code Provisions Regarding Human Remains

In California, when human remains are discovered outside of a cemetery, the relevant county coroner determines whether the remains are archaeological in nature or represent evidence of a crime (which would require the coroner to determine cause of death). When the coroner determines that the remains are of

prehistoric Native American origin, he or she contacts the NAHC (Health and Safety Code Section 7050.5(b) and (c)).

The following procedures only apply to Native American remains found in California on non-federal lands. When the NAHC receives notification of a discovery of Native American human remains from a county coroner, it notifies those persons it believes to be the most likely descendants of the deceased Native American. The descendants may, with the permission of the landowner or his or her authorized representative, inspect the site of the discovery of the Native American human remains and recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants must complete their inspection and make recommendations or express preferences for treatment within 48 hours of being granted access to the site.

Upon the discovery of Native American remains, the landowner is required to ensure that the immediate vicinity of the find is not damaged or disturbed by further development activity until the most likely descendants make their recommendations. The landowner (and, necessarily, the archaeological team) must confer with the descendants on all reasonable options regarding the descendants' preferences for treatment. The preferences may include, but not be limited to, at the descendants' discretion, further archaeological excavation and scientific study of the remains, immediate removal by the descendants to a site of their choice for reburial in accordance with their traditions, or scientific exhumation and study followed by reburial by the descendants.

4A.2.30 Fire Hazard Severity Zones

In accordance with PRC sections 4201–4204 and Government Code sections 51175–51189, the California Department of Forestry and Fire Prevention (CAL FIRE) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The zones are referred to as Fire Hazard Severity Zones and represent the risks associated with wildland fires. Under CAL FIRE regulations, areas within very high fire-hazard risk zones must comply with specific building and vegetation requirements intended to reduce property damage and loss of life within these areas.

4A.2.31 Mosquito Abatement Act

In 1915, the State Legislature enacted the Mosquito Abatement Act, which allowed local mosquito abatement organizations to form into specific special districts. Mosquito abatement districts use a combination of abatement procedures to control mosquitoes. Generally, mosquito control methods used selectively, singly, or in combination include biological agents, such as mosquitofish, which eat mosquito larvae; source reductions, such as draining the waterbodies that produce mosquitoes; pesticides; ecological manipulations of mosquito breeding habitat; and public education on preventive measures.

4A.2.32 California Vector Control Laws and Regulations

In California, local vector control agencies have the authority to conduct surveillance for vectors, prevent the occurrence of vectors, and abate production of vectors (California Codes: Health and Safety Code Section 2040). Vector control agencies also have authority to participate in review, comment, and make recommendations regarding local, state, or Federal land use planning and environmental quality processes, documents, permits, licenses, and entitlements for projects and their potential effects with respect to vector production (California Codes: Health and Safety Code Section 2041).

Additionally, agencies have broad authority to influence landowners to reduce or "abate" the source of a vector problem. Actions may include imposing civil penalties of up to $1,000 per day plus costs associated with controlling the vector. Agencies have authority to "abate" vector sources on private and publicly owned properties (California Codes: Health and Safety Code sections 2060–2065).

Mosquito and vector control programs that enter into a cooperative agreement with the California Department of Health Services are exempted from some pesticide-related laws under Title 3 of the California Code of Regulations Section 6620. Specifically, these agencies are exempted from "Consent to Apply" (Title 3 California Code of Regulations Section 6616), "Notice" (Title 3 California Code of Regulations Section 6618), and the "Protection of Persons, Animals, and Property" (Title 3 California Code of Regulations Section 6614). Essentially, these provisions allow the vector control agency to apply a pesticide to a property in the interest of preserving the public health, without notifying or obtaining permission from the landowner beforehand.

A vector control technician working at a vector control agency must be a "certified technician" or work under the direct supervision of a "certified technician" to apply pesticides. Vector control technicians achieve certification through an examination process administered by the California Department of Health Services.

Vector control agencies cannot use any pesticide not registered for use in California, and are required to keep detailed records of each pesticide application, including date, location, and amount applied. All pesticides must be applied in accordance with the labeling of the product as registered with the USEPA.

4A.2.33 California Environmental Justice Policies

4A.2.33.1 Environmental Justice – Senate Bill 115

SB 115 established the State of California as the first state to define environmental justice. Senate Bill 115 defines environmental justice as "the fair treatment of people of all races, cultures and income with respect to development, adoption and implementation of environmental laws, regulations and policies." SB 115 added this language to California Government Code Section 65040.12 and to Division 34 of the Public Resources Code relating to environmental quality. Finally, it also established the Governor's Office of Planning and Research as the coordinating agency for state programs and requested that

CalEPA establish a model environmental justice policy for its boards, departments, and offices.

4A.2.33.2 California Natural Resources Agency Environmental Justice Policy

The California Natural Resources Agency defines "environmental justice" in a manner consistent with the State of California as "the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." The agency states that its environmental justice policy is that the fair treatment of all people shall be considered during the planning, decision making, development, and implementation of its programs. The California Natural Resources Agency intends for its policy "to ensure that the public, including minority and low-income populations, are informed of opportunities to participate in the development and implementation of all Resources Agency programs, policies and activities, and that they are not discriminated against, treated unfairly, or caused to experience disproportionately high and adverse human health or environmental effects from environmental decisions."

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