

Regulatory Framework for Construction Projects

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Acronyms and Abbreviations

Acronym	Definition
AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ALUCP	airport land use compatibility plan
APCD	air pollution control districts
APCO	air pollution control officer
AQMD	air quality management district
ARPA	Archaeological Resources Protection Act
BLM	Bureau of Land Management
BMPs	best management practices
CAAQS	California Ambient Air Quality Standards
CAC	county agricultural commissioners
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalGEM	California Geologic Energy Management Division
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHRIS	California Historical Resources Information System
Construction General Permit	General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agencies
CVFPB	Central Valley Flood Protection Board
dBA	A-weighted decibel
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EFH	Essential Fish Habitat
EIR	environmental impact report
Energy Standards	Building Energy Efficiency Standards
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency

Acronym	Definition
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FLPMA	Federal Land Policy Management Act
FPPA	Farmland Protection Policy Act
GHG	greenhouse gas
IBC	International Building Code
ITP	incidental take permit
LCPs	local coastal programs
L_{dn}	day-night average sound level
LESA	Land Evaluation and Site Assessment
MRZ	mineral resource zone
MTCO _{2e}	million metric tons of carbon dioxide equivalent
MVCD	mosquito and vector control districts
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act of 1966
NHS	National Highway System
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
OSHA	Occupational Safety and Health Administration
OWTS Policy	Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems
RCRA	Resource Conservation and Recovery Act
Rivers and Harbors Act	Rivers and Harbors Act of 1899
RPS	Renewables Portfolio Standard
SB	Senate Bill
SMAQMD	Sacramento Metropolitan Air Quality Management District
STAA	Surface Transportation Assistance Act
State Parks	California Department of Parks and Recreation
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
TSCA	Toxic Substances Control Act of 1976
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
UST	underground storage tanks

Acronym	Definition
VMT	vehicle miles traveled
WDR	waste discharge requirement
WQCPs or basin plans	water quality control plans

E.1 Introduction

This appendix provides an overview of key federal, state, and local laws, policies, and regulations applicable to construction projects in general that could effectively avoid or minimize impacts of typical construction activities. Several regulations may apply to multiple resource categories but are discussed under the most applicable resource. This appendix is intended to support the impact analyses in Section 7.21, *Habitat Restoration and Other Ecosystem Projects*, and Section 7.22, *New or Modified Facilities*. Sections 7.21 and 7.22 contain additional regulatory descriptions specific to the types of projects evaluated in those sections, with a focus on State Water Board authorities. Descriptions of regulations, policies, and plans also are presented in several of the environmental resource sections of Chapter 7, *Environmental Analysis*, Sections 7.3 through 7.20, when they are relevant to the discussion of changes in hydrology or changes in water supply.

Most construction projects require state and local agencies to conduct an independent California Environmental Quality Act (CEQA) environmental review. (Pub. Resources Code, § 21000 et seq.) Projects subject to CEQA include any activity that may cause a physical change in the environment that is either directly undertaken by any public agency or requires discretionary approval by a public agency through funding or regulatory approval. An Initial Study is used to decide whether to prepare a Negative Declaration if the proposed project will have no potential for significant impacts or an environmental impact report (EIR) if the project will have a significant effect on the environment. The EIR is a detailed report that identifies potentially significant environmental impacts and mitigation measures to minimize, reduce, or avoid those impacts. CEQA requires agencies to prepare a written statement of overriding considerations when they decide to approve a project that will cause one or more significant effects on the environment that cannot be fully mitigated.

Construction projects that require federal approval or funding must comply with the National Environmental Policy Act (NEPA). (42 U.S.C. § 4321 et seq.) Under NEPA, an environmental assessment or environmental impact statement is prepared if an action will have significant adverse effects on the human environment. Both CEQA and NEPA provide for public review and comment and are intended to provide decision makers with the necessary information to make a well-informed decision. CEQA and NEPA compliance provide a mechanism for identifying and mitigating construction impacts in all resource categories.

In addition, construction projects on public land are subject to resource plans, which include provisions that mitigate construction impacts in most resource categories. These planning documents, sometimes called resource management plans, provide coordinated direction for the development and management of recreation lands, waters, and facilities and serve as the basis for guiding resource management activities in a manner that maintains and enhances public and resource benefits. Projects on public land are developed and implemented through detailed and site-specific activity planning and any necessary environmental analysis. The plans are likely to regulate one or more of the following resource areas: aesthetics, air quality, cultural resources, forestry and fire management, land use, livestock management, geology and minerals, hazards, recreation, water, and wildlife habitat.

Construction projects on private land are subject to local county and city jurisdiction that mitigate construction impacts in most resource categories. In reviewing and making decisions on

applications for various land use entitlements and development projects, the local government agency must typically make findings that the proposed activity (e.g., a conditional use permit or a subdivision of real property) is consistent with the applicable general plan. Each county and city has numerous policies and regulations that are outlined in each jurisdiction's respective general plan, municipal service review, or other regulatory framework (i.e., zoning ordinance, performance standards, other municipal or county programs). General plans address land use, housing, circulation, conservation, noise, safety, and open space (Gov. Code, § 65302) and may include additional elements. Development in California must be consistent with both the general plan and zoning, and many construction projects will need to comply with the local jurisdiction's general plan and zoning regulations. This compliance may be adequate mitigation in some circumstances, as regulatory compliance can serve as mitigation. Some policies relate specifically to construction and are directly applicable to construction impacts and mitigation, while other policies are more general and may relate more to project siting decisions or project operation.

General plans and zoning ordinances are likely to regulate the following resource areas: hydrology and water resources, biological resources, land use and planning, agriculture and forestry, aesthetics, air quality, cultural resources, geology and soils, mineral resources, hazards and hazardous materials, noise, public services, recreation, transportation and traffic, utilities and service systems, and greenhouse gas (GHG) emissions. Section E.2, *Environmental Regulations by Resource Area*, includes examples of local requirements from representative general plans from jurisdictions in the study area, but these are not intended to provide an exhaustive list of requirements. The study area spans 54 counties that are each subject to general plans, ordinances, and city plans. Any project proponent must consult its local planning department to determine the specific permitting and other requirements that apply to a specific project in a given jurisdiction.

E.2 Environmental Regulations by Resource Area

E.2.1 Aesthetics

E.2.1.1 National Scenic Byways Program

The National Scenic Byways Program was authorized in 1998 under the Transportation Equity Act for the twenty-first century. Under this program, the Secretary of Transportation may recognize roads for outstanding qualities by designating them as National Scenic Byways or All-American Roads. An All-American Road is considered a "destination unto itself," because it provides such an exceptional traveling experience that travelers would make a drive along the highway a primary reason for their trip (USDOT 2002). States and byways use program funds to develop and implement corridor management plans; construct scenic byway facilities (e.g., overlooks, interpretative centers, signs, exhibits); develop interpretative brochures, maps, and information; and promote scenic byways. These roads have scenic, natural, historic, cultural, archaeological, or recreational extrinsic qualities. Generally, the actual road is managed and maintained by the state or county department of transportation.

E.2.1.2 California Scenic Highway Program

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program to preserve and protect scenic highway corridors from changes that would affect the

aesthetic value of the land adjacent to the highways. Designation as a scenic highway is determined by views of natural landscape, scenic quality, and the extent of visual intrusion. A city or county must nominate an eligible scenic highway for official designation and adopt a corridor protection program that includes zoning and planning policies to preserve its scenic quality. Therefore, scenic highways are identified in county and city general plans. If a proposed project is within view of an officially designated State Scenic Highway, an evaluation must be prepared and the environmental document must discuss whether the project has the potential to affect the scenic highway and, if so, whether the project is consistent with the protection program.

Scenic resources, particularly for projects located near scenic byways, are identified and protected during construction. Disposal sites, construction signs, material storage, and other items of work necessary for construction that will create a visual impact should be identified. Mitigation for construction impacts should be considered, as with other project impacts, and appropriately incorporated into the project.

E.2.1.3 Public Lands

Public lands owned and operated by the U.S. Forest Service (USFS), National Park Service, and Bureau of Land Management (BLM) are subject to long-term planning documents (i.e., resource management plans) designed to guide future management actions to provide coordinated direction for the development and management of recreation lands, waters, and facilities. These plans serve as the basis for guiding resource management activities in a manner that maintains and enhances public and resource benefits, including visual resources. For example, scenic values on public lands managed by BLM are protected through visual resource management in accordance with section 102(a)(8) of the Federal Land Policy and Management Act of 1976. Visual resource classes are assigned through an inventory process to determine the level of visual change in the landscape character that would be allowed under the resource management plan. The USFS's Scenery Management System includes landscape character descriptions and scenic integrity objectives that can be used to help assess the compatibility of a proposed project with the surrounding landscape.

State agencies, such as the California Department of Parks and Recreation (State Parks), may also participate in long-term planning on public lands surrounding streams and reservoirs. The mission of State Parks is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. In accordance with Public Resources Code section 5002.2 and section 21000 et seq., State Parks is required to prepare a general plan and EIR for the lands that it manages prior to the development of major facilities.

E.2.1.4 Local Regulatory Framework

In addition to federal and state designations, counties and cities have their own scenic highway designations, which are intended to preserve and enhance existing scenic resources. Criteria for designation are commonly included in the conservation/open space element of the general plan.

Most local plans contain guidelines to preserve and enhance visual quality and aesthetic resources of urban and natural areas that are established in a jurisdiction's general plan. The open space and conservation elements of a general plan also protect the aesthetic values of the existing landscape to the extent that they guide development in a manner that preserves natural areas and community

character. The value attributed to a visual resource generally is based on the characteristics and distinctiveness of the resource and the number of persons who view it. Vistas of undisturbed natural areas, unique or unusual features forming an important or dominant portion of a viewshed, and distant vistas offering relief from less attractive nearby features are often considered to be scenic resources. In some instances, a case-by-case determination of scenic value may be needed, but often there is agreement within the relevant community about which features are valued as scenic resources.

For example, the City of Sacramento General Plan requires that new development be located and designed to visually complement the natural environment/setting when near the Sacramento and American Rivers and along streams (Policy ER 7.1.2). Additional policies seek to minimize impacts on visual resources from new development, including minimizing the creation of obtrusive lighting that is misdirected, excessive, or unnecessary (Policy ER 7.1.3) and avoiding the creation of incompatible glare from new development through design features. (City of Sacramento 2015.)

In areas close to or overlapping the Delta, general plans contain policies that apply specifically to management and protection of resources of the Delta and Suisun Marsh. All public and private land management and development activities within the primary zone of the Delta are required to be consistent with the goals, policies, and provisions of the *Land Use and Resource Management Plan for the Primary Zone of the Delta*, as adopted and may be amended by the Delta Protection Commission. Property development is limited to ensure the efficient use and conservation of agricultural lands, support open space values, and protect sensitive environmental areas (DPC 2010). In addition, the Solano County General Plan must be consistent with provisions of the Suisun Marsh Preservation Act of 1977 and the Suisun Marsh Protection Plan (BCDC 1976), which is currently undergoing review to assess whether policies should be amended or added to effectively preserve and protect Suisun Marsh (BCDC 2022). Solano County's local protection program sets forth the criteria and procedures to apply the plan's policies, including procedures and standards to review the design and location of any new development or structures in or adjacent to the Suisun Marsh management areas, to protect the visual characteristics of Suisun Marsh and, where possible, enhance views of Suisun Marsh.

The San Joaquin County General Plan includes policies aimed at protecting the visual character of scenic roadways and ensuring that views of waterways, hilltops, and oak groves from public land and public roadways are protected (Policies NCR-7.1 and NCR-7.2). The San Joaquin County General Plan also includes aesthetic policies encouraging project designs, lighting configurations, and operational practice that reduce light pollution, and requiring all new electric and communication distribution facilities adjacent to scenic routes to be placed underground when feasible (Policies NCR-7.7 and NCR-7.8, respectively). (^San Joaquin County 2016.)

E.2.2 Agriculture and Forest Resources

E.2.2.1 Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) was developed to protect farmland. *Farmland* under the FPPA refers to land that meets the definition of Prime or Unique Farmland or Farmland of Statewide Importance or Local Importance, as defined by section 1540(c)(1) of the FPPA. Farmland subject to FPPA requirements does not have to be currently in use for cropland. The FPPA requires federal agencies to coordinate with the Natural Resources Conservation Service if a proposed activity would directly or indirectly result in conversion of farmland to a nonagricultural use.

The FPPA requires federal agencies to evaluate potential direct and indirect effects of a proposed action and its alternatives on farmland before approving any activity that would convert farmland to a nonagricultural use. The FPPA requires completion of the Land Evaluation and Site Assessment (LESA) analysis, as described in 7 Code of Federal Regulations section 658.5, in order to determine an overall rating for each alternative analyzed. LESA is a point-based approach for rating the relevant importance of agricultural land resources based upon specific measurable features. The land evaluation is based on data from the National Cooperative Soil Survey, and the site assessment component considers nonsoil factors related to the agricultural use of a site, factors related to development pressures, and other public values of a site.

E.2.2.2 California Important Farmland Inventory System and Farmland Mapping and Monitoring

The Farmland Mapping and Monitoring Program produces “Important Farmland Maps,” which are a hybrid of land use information and mapped soil quality, to provide data to decision makers for use in assessing the status of agricultural land resources, reviewing trends in land use changes related to agricultural land, and planning for the future of agricultural land resources in the state.

The maps, which are prepared by the Natural Resources Conservation Service, classify land into one of eight categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Other Lands, Urban and Built Up, and Water. Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are collectively termed “agricultural land” in CEQA (Pub. Resources Code, §§ 21060.1 and 21095).

The California LESA model was developed to provide CEQA lead agencies with an optional methodology to quantitatively and consistently assess whether the agricultural land conversion being considered in the environmental review analysis resulted in potentially significant effects on the environment (Pub. Resources Code, § 21095).

E.2.2.3 California Farmland Conservancy Program Act

The California Farmland Conservancy Program Act of 1995 enables a city, county, district, or nonprofit organization to acquire perpetual easements for the conservation of agricultural land and open space or for historic preservation. (Civ. Code, §§ 815–816.) The purpose of the California Farmland Conservancy Program is to voluntarily convey conservation easements to qualified entities to conserve open spaces and other environmental values.

E.2.2.4 Williamson Act and Farmland Security Zone Contracts

The California Land Conservation Act of 1965, commonly known as the Williamson Act (Gov. Code, § 51200 et seq.), empowers local governments to establish agricultural preserves and Farmland Security Zones consisting of lands devoted to agricultural/open space uses. The Williamson Act enables local governments to enter into contracts with private landowners to promote the continued use of the relevant land in agricultural or related open space use for rolling 10-year terms. There is also a rolling 20-year contract option under a Farmland Security Zone contract. In return, landowners receive property tax assessments that are based on farming and open space uses instead of full market value. Local governments receive an annual subvention (subsidy) of forgone property tax revenues from the state via the Open Space Subvention Act of 1971.

A Williamson Act contract can be terminated by nonrenewal, cancellation, or rescission. If the landowner requests cancellation of the contract, they must provide a proposal for a specified alternative use for the property and provide a list of all agencies with permit authority over the proposed alternative use. The county board of supervisors or city council must approve the request for cancellation.

E.2.2.5 Forest Practices Act

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for administering timber harvesting and timberland conversion regulations on all nonfederal timberland pursuant to the 1973 Forest Practice Act. Any timber operations (as defined by Pub. Resources Code, § 4527) must be approved by CAL FIRE prior to undertaking operations. A timber harvesting plan must be prepared by a Registered Professional Forester detailing what timber the property owner wants to harvest, the amount of harvest, how the timber will be harvested, on what schedule the timber will be harvested, and the steps that will be taken to prevent damage to the environment (CAL FIRE 2022).

Timberland conversion occurs when timberland is converted to any nontimber growing use, such as residential or other land development. The conversion of timberland requires either a timberland conversion permit or a permit exemption from CAL FIRE (less than 3 acres). Approval is granted in the form of a timberland conversion permit from CAL FIRE if the conversion would be in the public interest; would not have a substantial and unmitigated adverse effect upon the continued timber-growing use or open-space use of other land zoned as timberland preserve; and the soils, slopes, and watershed conditions would be suitable for the uses proposed if the conversion were approved. (Pub. Resources Code, §§ 4621–4628.)

E.2.2.6 Local Regulatory Framework

Local jurisdictions have the authority to establish zoning ordinances that regulate the use of land for agricultural purposes and specify the location, height, bulk, number of stories, and size of buildings and structures; the size and use of lots and other open spaces; the percentage of a lot that may be occupied by a structure; and the intensity of land use.

Jurisdictions with extensive agriculture may have multiple zones for agriculture. Land uses within each of these zoning designations are generally restricted to the uses specified in the zoning ordinance. In this way, agricultural zoning provides protection for land in agricultural use; only agricultural uses (and, usually, compatible uses) are allowed on it. However, a local jurisdiction can choose to change the zoning, such as by changing an area zoned for agriculture to residential to accommodate housing. Such a change is accompanied by environmental analysis and public review. Local agencies may implement in-kind and fee mitigation requirements.

The *Land Use and Resource Management Plan for the Primary Zone of the Delta* (DPC 2010) contains policies that support the agricultural values of the Delta Plan, including the following:

- Policy P-2: Conversion of land to non-agriculturally-oriented uses should occur first where productivity and agricultural values are lowest.
- Policy P-7: Encourage management of agricultural lands which maximize wildlife habitat seasonally and year-round, through techniques such as fall and winter flooding, leaving crop residue, creation of mosaic of small grains and flooded areas, wildlife friendly farming, controlling predators, controlling poaching, controlling public access, and others.

The Suisun Marsh Protection Plan protects agricultural lands both within and adjacent to the marsh to ensure that current agricultural uses within the marsh remain economically feasible for as long as possible, and it includes a prohibition of land divisions or other development inconsistent with marsh protection and continued agricultural use (BCDC 1976).

The Sacramento County General Plan encourages the preservation of prime, statewide importance, unique, and local farmlands and directs development away from agriculturally sensitive areas (Policy AG-21). Sacramento County strives to balance the protection of prime, statewide importance, unique, and local importance farmlands with preservation of natural habitat so that the protection of farmlands can also protect habitat (Policy AG-10). (County of Sacramento 2011, Agricultural Element.)

The Conservation Element of the Contra Costa County General Plan provides that areas highly suited to prime agricultural production shall be protected and preserved for agriculture, and standards for protecting the viability of agricultural land shall be established (Policy 8-2). (^Contra Costa County 2005, Conservation Element.)

The San Joaquin County General Plan requires agricultural mitigation for any projects that convert agricultural uses to urban uses (Policy LU-7.10). The general plan also requires the county to protect agricultural lands needed for the continuation of viable commercial agricultural production and other agricultural enterprises (Policy LU-7.1). San Joaquin County also has policies specifically designed to support agriculture in the Delta, such as Policy D-3.2, which states that the County shall support efforts to maintain and enhance the value of Delta agriculture and value-added processing of Delta crops. (^San Joaquin County 2016.)

E.2.3 Air Quality

E.2.3.1 Clean Air Act

The federal Clean Air Act establishes the National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants and specifies future dates for achieving compliance. The six criteria air pollutants are ozone, carbon monoxide, nitrogen oxides as nitrogen dioxide, sulfur dioxide, particulate matter (less than 10 microns in aerodynamic diameter and less than 2.5 microns in aerodynamic diameter), and lead. The Clean Air Act delegates enforcement of the NAAQS to the state and mandates that the state submit and implement a state implementation plan for local areas that fail to meet those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

The federal Clean Air Act requires the U.S. Environmental Protection Agency (USEPA) to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Clean Air Act section 112, USEPA established National Emissions Standards for Hazardous Air Pollutants (NESHAP) to protect the public from 187 hazardous air pollutants that have been determined to cause or potentially cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental and ecological effects. Asbestos was one of the first hazardous air pollutants regulated under 40 Code of Federal Regulations, subpart M, section 61.145. Asbestos is a naturally occurring fibrous material that was historically used in many building materials for fireproofing and insulation. In general, buildings constructed prior to 1980 have the potential for asbestos-containing

materials. USEPA has classified asbestos as a Group A (known human) carcinogen that causes lung cancer and mesothelioma.

The California Clean Air Act (CCAA) requires all air districts in the state to endeavor to meet California Ambient Air Quality Standards (CAAQS). Unlike the federal Clean Air Act, the CCAA does not set precise attainment deadlines but requires that air districts meet the CAAQS by the earliest practical date and establishes increasingly stringent requirements for areas that will require more time to achieve standards. The CAAQS are generally more stringent than the NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. The California Air Resources Board (CARB) administers air quality policy in California, ensuring that the NAAQS and CAAQS are met. CARB, in turn, delegates regulatory authority for stationary sources and other air quality management responsibilities to local air agencies. The CAAQS are to be achieved through district-level air quality management plans incorporated into the state implementation plan. The CCAA adds substantially to the authority and responsibilities of the air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants the air districts authority to implement transportation control measures. The CCAA also emphasizes the control of “indirect and area-wide sources” of air pollutant emissions. The CCAA gives local air pollution control districts (APCD) explicit authority to regulate indirect sources of air pollution and establish traffic control measures.

CARB, under The Asbestos Program, enforces compliance with NESHP and investigates all related complaints, as specified by Health and Safety Code section 39658(b)(1). Of the 35 air districts in California, 19 do not have an asbestos program in place. In these nondelegated districts, a Notification of Demolition and Renovation form, submitted to both USEPA and CARB, is required for compliance with the asbestos NESHP. Each of the delegated California air districts has its own asbestos program and rules and should be contacted for questions and compliance requirements.

Detail on regional air basins, air districts, and federal and state criteria pollutant attainment designations for counties in the study area is included in Section 7.5, *Air Quality* (Section 7.5.2, *Environmental Setting*).

E.2.3.2 Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations

California Code of Regulations, title 17, section 93105 (Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations) requires that each APCD and air quality management district (AQMD) implement and enforce the measures identified therein. Section 93105 applies to any road construction and maintenance, construction, grading, quarrying, and surface mining operation where any portion of the area to be disturbed is located in a geographic ultramafic rock unit or has naturally occurring asbestos, serpentine, or ultramafic rock as determined by the owner/operator or the air pollution control officer (APCO); or naturally occurring asbestos, serpentine, or ultramafic rock is discovered by the owner/operator, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation. Exemptions from the requirements of section 93105 include agricultural and timber harvesting operations, sand and gravel operations where there is low probability of the presence of asbestos, and construction and grading activities conducted by homeowners on their property where the area to be disturbed is 1 acre or less.

Section 93105 identifies asbestos-control requirements for construction and grading operations in areas located in a geographic ultramafic rock unit or where there is naturally occurring asbestos, serpentine, or ultramafic rock. For areas greater than 1 acre, an asbestos dust mitigation plan must be developed and submitted to the appropriate APCD or AQMD for approval prior to the start of any construction or grading activity. If naturally occurring asbestos, serpentine, or ultramafic rock is discovered in the project area after construction or grading has begun, the appropriate APCD or AQMD must be notified no later than the next business day, and specific dust mitigation measures identified in section 93105, subsection (e)(1) must be implemented within 24 hours of discovery.

E.2.3.3 Air Toxics Program

The California Air Toxics Program establishes the process for identifying and controlling toxic air contaminants (TAC) and 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, Assembly Bill (AB) 3205 (Waters), Statutes of 1989, Health and Safety Code sections 42301.6–42301.9, 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. TACs are of particular concern in locations where sensitive receptors may be exposed to these contaminants. A sensitive receptor is a facility (e.g., schools, hospitals) or land use that houses or attracts members of the population, such as children, the elderly, and people with illnesses (e.g., asthma), who are particularly sensitive to the effects of air pollutants. A 1,000-foot radius is typically used by local air districts to determine nearby sensitive receptors that could be affected by proposed activities.

E.2.3.4 Mobile Source Emission Control Programs

CARB 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 CARB achieve the maximum 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 (CARB 2018).

On- and off-road vehicle emission control programs overseen by CARB include state fuel specifications, vehicle inspections, idling restrictions, regulations to require clean vehicle fleets, voluntary vehicle retirement programs, and engine emissions standards. CARB has extensive statewide programs underway to reduce diesel particulate matter.

The on-road truck regulation requires heavy trucks to be retrofitted with particulate matter filters. The regulation applies to privately and federally owned diesel-fueled trucks with a gross vehicle weight rating greater than 14,000 pounds (CARB 2019a). Compliance with the regulation can be reached through one of two paths: (1) vehicle retrofits according to engine year or (2) a phase-in schedule. Compliance paths ensure that, by January 2023, nearly all trucks and buses will have 2010 model year engines or newer. This regulation would apply to diesel trucks used during construction.

CARB has established a series of increasingly strict tailpipe emission standards for new off-road diesel equipment (CARB n.d.) and on-road diesel trucks (CARB 2019b) operating in California. New equipment used during construction would be required to comply with the standards.

The Carl Moyer Memorial Air Quality Standards Attainment Program is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment (i.e., construction vehicles and equipment). The program is a partnership between CARB and the local air districts throughout the state to reduce air pollution from heavy-duty engines. Locally, the air districts administer the Carl Moyer Memorial Air Quality Standards Attainment Program (CARB 2020).

E.2.3.5 California Division of Occupational Safety and Health Respiratory Protection Standard

The California Division of Occupational Safety and Health (Cal/OSHA) operates under the California Department of Industrial Relations and is responsible for setting and enforcing standards; issuing permits, licenses, and certifications; and providing education and outreach. The objective of the Department of Industrial Relations' Respiratory Protection Standard (Cal. Code Regs., tit. 8, § 5144, appendices A–D) is to control occupational diseases caused by breathing air contaminated by harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. Section 5144 and its appendices also mandate employers to provide respirators and perform Occupational Safety and Health Administration (OSHA)–accepted fit test checks and employees to perform seal checks and follow all instructions provided by the respirator manufacturer. Additionally, section 5141 mandates controlling harmful exposure to employees by using engineering controls, administrative controls, or protective equipment.

E.2.3.6 Local Regulatory Framework

Air districts are county or regional governing authorities that have been established to oversee the attainment of air quality standards within air basins as defined by the state. Each local air district has developed its own program and regulations to attain and maintain air quality standards, while integrating federal and state requirements. For example, in Sacramento County, the Sacramento Metropolitan Air Quality Management District (SMAQMD) rules and regulations include regulations for demonstration of general conformity (Rule 104), avoidance of nuisance conditions (Rule 402), fugitive dust control (Rule 403), and prohibitions on open burning (Rule 407).

Responsibilities of local air districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing environmental documents required by CEQA prepared for projects with potential air quality effects. The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met.

Most air districts regulate diesel-fueled stationary sources (e.g., generators, stationary water pumps) by requiring registration or additional permits. Air districts also typically require an Authority to Construct for the construction and installation of stationary sources greater than 50 horsepower. This requirement ensures that all air district regulations have been met prior to construction and installation.

In many cases, the local air districts have established CEQA guidelines and significance thresholds for evaluation of air quality–related impacts. For example, SMAQMD provides specific guidance on construction and operational mitigation in *Guide to Air Quality Assessment in Sacramento County*, as well as in SMAQMD's *Basic Construction Emission Control Practices*, which identifies best management practices (BMPs) specifically for controlling fugitive dust from construction

sites. Additionally, projects with construction mitigation requirements must reduce emissions from off-road equipment. Some projects may be required to reduce emissions from on-road haul trucks and pay a mitigation fee. The San Joaquin Valley APCD's CEQA guidance, *Guidance for Assessing and Mitigating Air Quality Impacts*, includes significance thresholds for construction and operation of projects and plans, as well as consideration and discussion of mitigation measures.

In addition to air quality-related programs implemented by local air districts, many city and county general plans contain goals and/or policies related to improving air quality through, for example, supporting local and regional air quality improvement efforts and implementing BMPs during construction.

Policies in the Sacramento County General Plan, such as AQ-3, AQ-4, and AQ-14, allow for the development of air pollution thresholds and mitigation from CARB to be adopted by SMAQMD. The policies also encourage improvement for SMAQMD's ambient air quality monitoring to establish the thresholds needed to reach the County's goals. Using identified conservation measures, Sacramento County will promote optimal air quality benefits (Policy AQ-17). (County of Sacramento 2011, Air Quality Element.)

The San Joaquin County General Plan seeks to protect and maintain air quality through the use of its general plan policies. Policy PHS-5.4 states that San Joaquin County will encourage innovative mitigation measures and project redesign that reduces air quality impacts by coordinating with the San Joaquin Valley APCD and other interested parties. Policy PHS-5.11 requires that all access roads, driveways, and parking areas serving new development be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use of the project. (^San Joaquin County 2016.)

E.2.4 Biological Resources

E.2.4.1 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 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 U.S.C. § 1532(19).)

If there is a potential that implementing a project would result in take of a federally listed species, either an incidental take permit (ITP) application accompanied by a habitat conservation plan, under section 10(a)(1)(B) of the ESA, or a federal interagency consultation, under section 7 of the ESA, is required. A habitat conservation plan and ITP are the mechanism for authorizing take of listed species for projects that are authorized, funded, or carried out by a state or local government agency; and the section 7 process (including a biological opinion and accompanying incidental take statement) is the mechanism for authorizing take of listed species for actions that are authorized, funded, or carried out by a federal agency.

In addition, regardless of whether take may occur, a federal interagency consultation under section 7 is required if a federal agency action *may affect* a federally listed species or designated critical habitat. Under the ESA, the National Marine Fisheries Service has jurisdiction over

anadromous fish, marine fish and reptiles, and marine mammals; and the U.S. Fish and Wildlife Service 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).

For any nonfederal construction project, the burden is on the project proponent to decide whether an ITP is needed. The fisheries agencies offer services to help determine whether a permit is required and how to avoid and reduce impacts. A project could be designed with seasonal restrictions on construction to minimize disturbances during nesting. Mitigation measures include preservation (via acquisition or conservation easement) of existing habitat, enhancement or restoration of degraded or a former habitat, creation of new habitats, establishment of buffer areas around existing habitats, modifications of land use practices, and restrictions on access.

E.2.4.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act (Pub. L. No. 104-297), requires that all federal agencies consult with the National Marine Fisheries Service 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, support a long-term sustainable fishery, and contribute to a healthy ecosystem. (16 U.S.C. § 1802(10).)

The Pacific Fishery Management Council has designated the 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. Because EFH applies only to commercial fisheries, habitat for Chinook salmon is included, but habitat for steelhead is not.

E.2.4.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act implements a series of international treaties that provide migratory bird protection. The Migratory Bird Treaty Act authorizes the Secretary of the Interior to regulate the taking of migratory birds; and the act provides that it is 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. § 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.

E.2.4.4 Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds

Executive Order 13186 (66 Fed. Reg. 3853 (Jan. 17, 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 the U.S. Fish and Wildlife Service 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.

E.2.4.5 Executive Order 13112: Invasive Species

Executive Order 13112 (64 Fed. Reg. 6183 (Feb. 8, 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 established a national Invasive Species Council composed of federal agencies and departments, as well as a supporting Invasive Species Advisory Committee composed of state, local, and private entities. The council and advisory committee oversee and facilitate implementation of the executive order, including preparation of the National Invasive Species Management Plan. Federal activities addressing invasive aquatic species are now coordinated through this council and through the National Aquatic Nuisance Species Task Force.

E.2.4.6 Executive Order 11990: Protection of Wetlands

Under Executive Order 11990 (42 Fed. Reg. 26961 (May 24, 1977)), each federal agency, in carrying out its ordinary responsibilities, must take actions to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. Federal agencies must avoid undertaking new construction located in wetlands unless no practicable alternative is available, and the action includes all practicable measures to minimize harm to wetlands.

E.2.4.7 California Endangered Species Act

The California Endangered Species Act (CESA) states 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; and that the conservation, protection, and enhancement of these species and their habitat is of statewide concern (Fish & G. Code, § 2051). The California Fish and Game Commission is responsible for listing species under CESA; and the California Department of Fish and Wildlife (CDFW) is responsible for implementing, enforcing, and issuing permits under CESA.

Similar to the federal ESA, CESA strictly prohibits the take of any threatened or endangered fish, wildlife, or plant species or species that is a candidate for listing as threatened or endangered under CESA. Fish and Game Code section 2081 allows CDFW to authorize take of CESA-listed species (issue an ITP), if that take is incidental to otherwise lawful activities and if certain conditions are met. 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 that under the ESA. If CDFW 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.

Permittees must implement species-specific minimization and avoidance measures and fully mitigate the impacts of the project. (Fish & G. Code, § 2081(b); Cal. Code Regs., tit. 14, §§ 783.2–783.8.) Minimization measures are collaboratively developed on a project-by-project basis by the permit applicant and CDFW. Examples of general measures used in the past include the following.

- Erecting protective fencing around sensitive habitat within construction sites.

- Limited operating periods to avoid breeding and movements.
- Preconstruction surveys to identify and mark sensitive or suitable habitat features.
- On-site construction personnel education programs covering species identification, protected status, and measures to take if a protected species is found.

Certain sections of the Fish and Game Code pertain to fully protected wildlife species (Fish & G. Code, §§ 3505–3800 [birds], § 4700 [mammals], § 5050 [reptiles and amphibians], and § 5515 [fish]). Fully protected species may not be taken or possessed at any time; and no licenses or permits may be issued for take of fully protected species, with certain narrow exceptions (e.g., for necessary scientific research).

E.2.4.8 California Native Plant Protection Act

The Native Plant Protection Act (Fish & G. Code, §§ 1900–1913) is intended to preserve, protect, and enhance endangered or rare native plants in the state. Under Fish and Game Code section 1901, a species, subspecies, or variety of native plant is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. The Native Plant Protection Act prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations and emergencies and, after properly notifying CDFW, for vegetation removal from canals, roads, and other sites; changes in land use; and in certain other situations.

E.2.4.9 Lake and Streambed Alteration Agreement

Under Fish and Game Code sections 1600–1616, entities are required to notify CDFW prior to commencing any activity that may substantially divert or obstruct the natural flow of the bed, channel, or bank of any river, stream, or lake. CDFW requires a Lake and Streambed Alteration Agreement when it determines that an activity will substantially alter a river, stream, or lake and may substantially adversely affect existing fish or wildlife resources. The streambed alteration agreement must include measures designed to protect the affected fish and wildlife and associated riparian resources.

E.2.4.10 Fish and Game Code Section 5650

Under Fish and Game Code section 5650, it is unlawful to “deposit in, permit to pass into, or place where it can pass into the waters of this State” various substances. Those substances that may be applicable to construction projects include petroleum, acid, coal or oil tar, asphalt, bitumen (used for road surfacing and roofing), sawdust, shavings, or any substance or material deleterious to fish, plants, or birds.

This section does not apply to a discharge or release that is authorized pursuant to, and in compliance with, the terms and conditions of a waste discharge requirement (WDR) pursuant to Water Code section 13263 or a waiver issued pursuant to Water Code section 13269, subdivision (a) by the State Water Board or a regional water board, which has, after a public hearing, issued a water quality certification pursuant to Water Code section 13160.

E.2.4.11 Local Regulatory Framework

General plans contain policies for urban development, describe strategies to recognize and preserve areas of open space and natural resources, and identify measures for preservation of productive

farm resources. Policies and programs guide future development in a way that reduces impacts on biological resources, including the designation of permanent open space, special protections for wetlands and riparian areas, and wildlife corridors. Sensitive habitat areas are subject to special development and review requirements. Generally, project review involves evaluating habitat value of the property, preservation of critical sensitive habitat areas, and conditions of approval to protect special-status species during construction and occupancy. Larger properties with high priority biological resources may require a biological assessment by a qualified biologist.

Many local jurisdictions have tree protection ordinances that protect specific tree species (e.g., *Umbellularia californica*, *Aesculus* spp., *Quercus* spp.), trees of a certain circumference or height, or trees with historical significance on public or private property. Permits are usually required to remove, encroach upon, or prune these trees; and these ordinances also provide for the replacement of removed trees. For example, heritage oak trees are protected in the City of Stockton under Stockton Municipal Code 16.130, which governs the removal of heritage trees.

The Conservation Element of the Sacramento County General Plan contains three sections that discuss the preservation and management of biotic resources: Section V. Vegetation and Wildlife, Section VI. Aquatic Resources, and Section VII. Terrestrial Resources. Section V. Vegetation and Wildlife has two main subsections: the Habitat Protection and Management subsection, and the Special Status Species and Their Respective Habitats subsection. The Habitat Protection and Management subsection includes many overarching policies that address habitat mitigation, habitat preserves and management, and habitat protection and project review. The Special Status Species and their Respective Habitats subsection includes policies and measures to protect and manage habitats for the protection of special-status species. Section VI. Aquatic Resources, covers the protection of vernal pools, rivers and streams, and fisheries. Lastly, Section VII. Terrestrial Resources addresses the protection and preservation of native vegetation, landmark and heritage trees, and the urban forest, while also promoting new trees in the urban landscape. Development project applications are evaluated by the Planning and Environmental Review section for impacts on species or habitat. Project proponents may be required to preserve a specified acreage of land possessing equal or better habitat values or pay into a fund to purchase mitigation land or easements. (County of Sacramento 2011, Conservation Element.)

The Sacramento County General Plan Conservation Element also includes policies that ensure no net loss of wetlands, riparian woodlands, or oak woodlands and ensures that mitigation will occur for any loss or modification of sensitive habitat types, such as vernal pools, wetlands, riparian areas, native vegetative habitat, or special-status species habitat (Policies CO-58 and CO-59) (County of Sacramento 2011, Conservation Element). Similarly, the San Joaquin County General Plan includes policies that protect significant biological and ecological resources and preserve natural areas and open space buffers for the benefit of wildlife and ecosystems (Policies NCR 2.1, NCR 2.7, NCR 1.1, and NCR 2.8) (^San Joaquin County 2016).

The Conservation Element of the County of Contra Costa's General Plan contains policies (Policies 8-13 and 8-28) to identify and protect critical ecological and scenic characteristics of rangelands, woodlands, and wildlands, including the native oak, bay, and buckeye trees. Implementation Measure 8-1 of the Conservation Element requires avoidance, minimization, and other mitigation techniques when development projects have the potential to affect a wetland. (^Contra Costa County 2005, Conservation Element.)

E.2.5 Cultural Resources

E.2.5.1 Antiquities Act of 1906

The Antiquities Act of 1906 (16 U.S.C. §§ 431–433) protects cultural resources under the jurisdiction of the federal government. The act imposes fines or imprisonment of any person convicted of appropriating, excavating, injuring, or destroying any historic or early Native American ruin or monument or other object of antiquity under the control or management of the federal government.

E.2.5.2 National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 (NHPA) (54 U.S.C. § 300101 et seq.), as amended, is the primary federal law governing the preservation of cultural and historic resources in the United States. Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties that are or that may be eligible for listing in the National Register of Historic Places (NRHP). Historic properties are any early Native American or historic districts, sites, buildings, structures, or objects that are eligible for or already listed in the NRHP. Also included are any artifacts, records, and remains (surface or subsurface) that are related to and located within historic properties and any properties of traditional religious and cultural importance to Native American tribes or Native Hawaiian Organizations.

Section 106 regulations require consultation with the State Historic Preservation Officer, Native American tribes, and interested members of the public throughout the process by using the following four principal steps.

1. Initiate the section 106 process (36 C.F.R. § 800.3) by identifying the undertaking, consulting parties, and coordinating with other reviews, such as reviews related to NEPA.
2. Identify the area of potential effects and historic properties in the area of potential effects (36 C.F.R. § 800.4).
3. Assess the impact of the undertaking on historic properties in the area of potential effects and make a finding of effect (36 C.F.R. § 800.5).
4. Resolve adverse effects (36 C.F.R. § 800.6).

Adverse effects on historic properties often are resolved through preparation of a memorandum of agreement or a programmatic agreement developed in consultation between the lead federal agency, State Historic Preservation Officer, Native American tribes, and consulting parties. The Advisory Council on Historic Preservation is also invited to participate. The memorandum of agreement or programmatic agreement memorializes, in a narrative fashion, the steps or stipulations that the parties agree to implement to minimize and resolve adverse effects. The substance of the treatment methods or other measures used to reduce or avoid adverse effects is typically defined in attached documents.

Section 112 of the NHPA requires that federal agencies' employees and contractors responsible for historic resources meet professional standards as determined by the Secretary of the Interior. The Secretary of the Interior's Professional Qualification Standards were developed by the National Park Service to ensure that "a consistent level of expertise would be applied nationally to the identification, evaluation, documentation, registration, treatment and interpretation of historic and archeological resources" (62 Fed. Reg. 33708 (June 20, 1997)). The qualifications define minimum

education and experience required to perform identification, evaluation, registration, and treatment activities and are identified in 36 Code of Federal Regulations section 61—Professional Qualifications Standards.

E.2.5.3 Secretary of the Interior’s Standards for Rehabilitation

The Standards for Rehabilitation (36 C.F.R. § 67), published in 1977, guide the long-term preservation of significance of properties listed in or eligible for listing in the NRHP by preserving historic materials and features. The standards, which are regulations for the Federal Historic Preservation Tax Incentives Program, apply to historic buildings of all materials, construction types, sizes, and occupancy and encompass the exterior and the interior, related landscape features, and the building’s site and environment, as well as attached, adjacent, or related new construction. The *Illustrated Guidelines for Rehabilitating Historic Buildings* (NPS 1997), though not part of the regulations, describe recommendations and considerations for the general design.

E.2.5.4 Archaeological Resources Protection Act and Native American Graves Protection and Repatriation Act

The Archaeological Resources Protection Act (ARPA) requires a permit for intentional excavation of archaeological materials on federal lands. (16 U.S.C. § 470ee(a).) The federal agency that owns or controls the land may dispense permits for excavation as provided in the ARPA regulations (43 C.F.R. § 7.5). The permit may require notice to affected Native American tribes (43 C.F.R. § 7.7) and compliance with the terms and conditions provided in the ARPA regulations (43 C.F.R. § 7.9). Work on federal lands and collections retrieved from federal lands are subject to ARPA.

For activities on federal lands, the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (25 U.S.C. § 3001 et seq.) provides for the repatriation of Native American cultural items and establishes procedures for the inadvertent discovery of Native American cultural items on federal or tribal lands.

NAGPRA addresses the rights of lineal descendants and Native American tribes to recover Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are held by the federal government. (25 U.S.C. § 3001.) These parties are to be consulted when such items are inadvertently discovered or intentionally excavated on federal or tribal lands.

NAGPRA also provides guidance on inadvertent discoveries of Native American or Hawaiian human remains on lands owned or controlled by the federal government. When an inadvertent discovery on these lands occurs in association with construction, construction must cease. The party that discovers the remains must notify the relevant federal agency, and the remains must be transferred according to the ownership provisions above. (25 U.S.C. § 3002(d).) NAGPRA requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items in their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. NAGPRA also requires planning for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony.

E.2.5.5 Cultural Resources Management Plans

Cultural resources management plans provide an organizational and regulatory framework for managing cultural resources and historic properties. Cultural resources management plans identify

documented cultural resources within specific management boundaries; assess the potential for cultural resources that have not yet been identified within management boundaries; identify threats to the cultural resources; and provide a management strategy and BMPs to ensure that the key characteristics of the cultural resources are preserved and that there is compliance with applicable federal, state, and local laws.

E.2.5.6 CEQA Statute and Guidelines

CEQA and the State CEQA Guidelines include special procedures for identifying, analyzing, and disclosing significant impacts on cultural resources, which include all resources listed in or formally determined eligible for listing in the NRHP, California Register of Historical Resources (CRHR), or local registers. In addition, AB 52 (Gatto), Statutes of 2014, amended Public Resources Code section 5097.94, added sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3, and was signed into law on September 25, 2014. AB 52 requires lead agencies to evaluate a project's potential to have an impact on tribal cultural resources and establishes a consultation process for California Native American tribes as part of CEQA. Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are eligible for inclusion in the CRHR or included in a local register of historical resources. Written notice of a proposed project and a 30-day window to request consultation is to be provided to a California Native American tribe that has previously requested it and that is traditionally and culturally affiliated with the geographic area of a proposed project.

E.2.5.7 California Register of Historical Resources

The 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. 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.

The California Historical Resources Information System (CHRIS) consists of the California Office of Historic Preservation (OHP), nine information centers, and the State Historical Resources Commission. OHP administers and coordinates the CHRIS and presents proposed CHRIS policies to the State Historical Resources Commission, which approves these policies in public meetings. The CHRIS Inventory includes the State Historic Resources Inventory maintained by OHP, as defined in Public Resources Code section 5020.1(p), and the larger number of resource records and research reports managed under contract by the nine information centers.

E.2.5.8 Public Resources Code and Health and Safety Code Provisions Regarding Human Remains

When human remains are discovered outside of a cemetery, further excavation or disturbance of the site must be stopped until the county coroner is contacted and determines whether an investigation of the cause of death is required. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands. (Health & Saf. Code, § 7050.5, subd. (b).) If the coroner determines that the remains are those of a Native

American, he or she must contact the Native American Heritage Commission within 24 hours of making the determination. (Health & Saf. Code, § 7050, subd. (c).) When the Native American Heritage Commission receives notification of a discovery of Native American human remains from a county coroner, it notifies those persons it believes to be most likely descended from the deceased Native American. The descendants have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment, may be discussed.

E.2.5.9 Local Regulatory Framework

Many of the counties and cities have developed policies and goals intended to document and preserve cultural resources in their areas, focusing and at times bolstering the regulations under CEQA or supporting preservation efforts in non-CEQA settings. These general plans specify locally proposed goals or objectives and policies intended to enforce them. Although many policies mirror those required under CEQA and are codified in general plans, some go beyond CEQA and require the consideration of development impacts under nondiscretionary projects in their jurisdictions.

For example, Sacramento County includes a cultural resources section in the Conservation Element of the County's general plan that includes objectives, policies, and implementation measures to promote the inventory, protection, and interpretation of the cultural heritage of Sacramento County, including historical and archaeological settings, sites, buildings, features, artifacts, and/or areas of ethnic historical, religious, or socioeconomical importance. In addition to comprehensive surveying and cataloging; protecting known cultural resources from vandalism, unauthorized excavation, or accidental destruction; and public education and outreach, the plan contains policies and programs that provide attention and care during project review and construction to ensure that cultural resource sites, either previously known or discovered on the project site, are properly protected with sensitivity to Native American values. As a condition of approval for discretionary projects, Sacramento County would require appropriate mitigation to reduce potential impacts where development could adversely affect cultural resources. The following policies from the Sacramento County General Plan provide for the protection and mitigation of cultural resources (County of Sacramento 2011, Conservation Element).

- CO-153. Refer projects with identified archeological and cultural resources to the Cultural Resources Committee to determine significance of resource and recommend appropriate means of protection and mitigation. The Committee shall coordinate with the Native American Heritage Commission in developing recommendations.
- CO-154. Protection of significant prehistoric, ethnohistoric and historic sites within open space easements to ensure that these resources are preserved in situ for perpetuity.
- CO-155. Native American burial sites encountered during preapproved survey or during construction shall, whenever possible, remain in situ. Excavation and reburial shall occur when in situ preservation is not possible or when the archeological significance of the site merits excavation and recording procedure. On-site reinterment shall have priority. The project developer shall provide the burden of proof that offsite reinterment is the only feasible alternative. Reinterment shall be the responsibility of local tribal representatives.

- CO-156. The cost of all excavation conducted prior to completion of the project shall be the responsibility of the project developer.
- CO-157. Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.

The Contra Costa General Plan also contains policies to protect and preserve the cultural resources within the county. Policies 9-29 and 9-30 provide for protecting buildings that are historically valuable and providing information on the archaeological resources that exist in the area when applicants apply for land use permits. During the development and environmental review process, project staff are asked to develop an archaeological sensitivity map for discretionary permits to determine potential impacts on cultural resources (Implementation Measure 9-i). Another program in the general plan provides for promoting the use of the State of California Historic Building Code to protect historic sites in Contra Costa County (Implementation Measure 9-m). (^Contra Costa County 2005, Open Space Element.)

San Joaquin County's General Plan policies to protect cultural resources include Policy NCR-6.1, which states that the County shall protect historical and cultural resources and promote expanded cultural opportunities for residents, and Policy NCR-6.5, which states that the County shall protect significant archaeological and historical resources by requiring that an archaeological report be prepared by a qualified cultural resource specialist prior to the issuance of any discretionary permit or approval in areas determined to contain significant historic or prehistoric archaeological artifacts that could be disturbed by project construction. The general plan also includes policies specifically aimed at preserving the Delta's heritage, such as Policy D-4.1, which states that the County shall protect the unique character and qualities of the Delta primary zone by preserving the Delta's cultural heritage and the strong agricultural base. (^San Joaquin County 2016.)

E.2.6 Energy and Greenhouse Gas Emissions

E.2.6.1 California Renewables Portfolio Standard

In an effort to increase reliance on renewable energy sources, the California Renewables Portfolio Standard (RPS) was established in 2000. As specified through Senate Bill (SB) 100 (De Leon), amending Public Resources Code sections 399.11, 399.15, and 399.30 and adding section 454.53, the RPS, which is administered by the California Public Utilities Commission, sets requirements that 50 percent of electricity retail sales be served by renewable resources by 2026 and 60 percent by 2030. Facilities that contribute to the RPS include geothermal, biomass, biogas, wind, solar, and small hydropower facilities. As further specified through SB 100, providers of electricity will eventually be obligated to supply 100 percent carbon-free electricity by 2045, although, to attain this goal, energy sources that are not part of the RPS can be included as long as they do not emit carbon dioxide. These additional zero-carbon energy sources could include sources such as large hydropower facilities, nuclear power plants, or natural gas facilities with carbon capture and storage.

E.2.6.2 Building Energy Efficiency Standards

The Building Energy Efficiency Standards (Energy Standards) (Cal. Code Regs., tit. 24, pts. 1, 6) are energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings (residential and nonresidential), additions to existing buildings, and

alterations to existing buildings. The Energy Standards are updated approximately every 3 years. Primary responsibility for compliance and enforcement with the Energy Standards rests with the local enforcement agency, typically associated with a city or county government, or the state agency for construction of a state building. The Energy Standards specify detailed reporting requirements that are intended to provide design, construction, and enforcement parties with information needed to complete the building process and ensure that the appropriate energy features are installed.

Public Resources Code section 25402.1(h)2 and section 10-106 of the Energy Standards establish a process that allows local adoption of energy standards that are more stringent than the statewide standards. This process allows local governmental agencies to adopt and enforce energy standards for newly constructed buildings, additions, alterations, and repairs to existing buildings, provided the Energy Commission finds that the standards will require buildings to be designed to consume no more energy than permitted by California Code of Regulations, title 24, part 6.

E.2.6.3 Executive Order Reduction Targets

In 2005, Governor's Executive Order S-3-05 (June 1, 2005) established goals to reduce California's GHG emissions to (1) 2000 levels by 2010 (achieved); (2) 1990 levels by 2020 (achieved); and (3) 80 percent below the 1990 levels by 2050. In 2018, Governor's Executive Order B-55-18 (Sept. 10, 2018) established a new state goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. Executive orders are binding on state government agencies but are not legally binding on cities and counties or on private development.

E.2.6.4 Vehicle Efficiency Standards

AB 1493 (Pavley), Statutes of 2002, Health and Safety Code section 43018.5, requires CARB to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the model year 2009. Additional strengthening of the Pavley standards (referred to previously as *Pavley II* and now referred to as the *Advanced Clean Cars* measure) was adopted for vehicle model years 2017 through 2025 in 2012.¹ Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

E.2.6.5 Assembly Bill 32: California Global Warming Solutions Act

The California Global Warming Solutions Act (AB 32 [Nunez], Statutes of 2006, adding div. 25.5 [commencing with § 38500] to Health & Saf. Code) created a comprehensive, multiyear program to reduce GHG emissions in California. AB 32 required CARB to develop a scoping plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. AB 32 further details and puts into law the midterm GHG reduction target established in Governor's Executive Order S-3-05—reduce GHG emissions to 1990 levels by 2020. AB 32 identifies

¹ On September 27, 2019, USEPA and the National Highway Traffic Safety Administration (NHTSA) published a decision to withdraw California's waiver and finalize regulatory text implementing NHTSA's statutory authority to set nationally applicable fuel economy standards that made explicit that state programs would also be preempted under NHTSA's authorities (84 Fed. Reg. 51310). A lawsuit filed by California, 22 other states, the District of Columbia, and two cities was filed in advance of the publication on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826). California's waiver and current fuel economy standards will remain in effect until the courts rule on the lawsuit and proposed regulatory changes.

CARB as the state agency responsible for the design and implementation of emissions limits, regulations, and other measures to meet the target.

In 2007, CARB approved the 2020 emission limit (1990 level) of 427 million metric tons of carbon dioxide equivalent (MTCO₂e) of GHGs. The 2020 target requires the reduction of 169 million MTCO₂e, or approximately 30 percent below the state's projected "business-as-usual" 2020 emissions of 596 million MTCO₂e.

E.2.6.6 Climate Change Scoping Plan

CARB, which is responsible for regulating the state's GHG emissions, is required by AB 32 to develop a scoping plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. CARB adopted the first scoping plan in 2008 and most recently updated the plan in 2017 (CARB 2017). The most recent update establishes a framework to achieve a 40 percent reduction in GHGs by 2030 compared with 1990 levels, building on the major programs of the previous scoping plan, including cap-and-trade regulation; low fuel carbon standards; more efficient cars, trucks, and freight movement; renewables standards; and reductions in methane emissions from agricultural and other wastes. California has also established an RPS, which obligates investor-owned utilities, energy service providers, and community choice aggregators to increase retail sales per year from eligible renewable sources, with the long-range target of procuring 33 and 50 percent of retail sales from renewable resources by 2020 and 2030, respectively.

Appendix B to the 2017 Scoping Plan includes a list of actions that could be undertaken at a local level to support the state's climate goals. These actions fall into two categories: (1) local municipal code changes, zoning changes, or policy directions; and (2) construction and operation mitigation measures that could be implemented during construction and operation of individual projects.

E.2.6.7 Guidance on National Environmental Policy Act Consideration of Greenhouse Gases and Climate Change

The Council on Environmental Quality has provided guidance to assist federal agencies in their consideration of the effects of GHG emissions and climate change when evaluating proposed federal actions under NEPA (CEQ 2016). This draft guidance affirms the requirements of the statute and regulations and their applicability to GHGs and climate change impacts.

E.2.6.8 State CEQA Guidelines on Analysis of Greenhouse Gas Emissions

The State CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change. (Pub. Resources Code, § 21083, subd. (b)(2).) The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. The State CEQA Guidelines emphasize the necessity to determine potential climate change effects of a project and propose mitigation, as necessary. Section 15126.4 of the State CEQA Guidelines includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision; implementation of project features, project design, or other measures which are incorporated into a project to substantially reduce energy consumption or GHG emissions; off-site measures, including

offsets that are not otherwise required, to mitigate a project's emissions; and measures that sequester carbon or carbon-equivalent emissions.

E.2.6.9 Local Regulatory Framework

Some APCDs and AQMDs have developed guidance and thresholds to assist lead agencies evaluate, analyze, and reduce GHG emissions from plans and projects and evaluate short-term GHG emissions from construction activities. For example, SMAQMD has issued recommendations for CEQA analyses to address concerning the potential impacts of project-generated GHG emissions, including a quantification of the annual mass emissions of GHGs that will be generated by project construction and the input parameters and assumptions used to estimate these values. In addition, SMAQMD has established a 1,100 MTCO₂e per year threshold to evaluate the significance of short-term construction emissions generated within the Sacramento area and has identified BMPs in its CEQA guidance document, *Guide to Air Quality Assessment in Sacramento County*, to reduce GHG emissions from construction projects, such as improving the fuel efficiency from construction equipment and using CARB-approved low-carbon fuel for construction equipment (SMAQMD 2016). The San Joaquin Valley APCD has not established construction-related GHG thresholds but has identified a level (230 MTCO₂e per year) below which project-specific increases in GHG emissions would be considered less than significant for CEQA purposes.

County general plans often provide guidance on the reduction of GHG emissions. For example, the Sacramento County General Plan directs projects to enact cost-effective energy conservation performance standards consistent with USEPA Energy Star standards for new construction (Policy LU-70) (County of Sacramento 2011, Land Use Element). Sacramento County also seeks to reduce GHG emissions from County operations and private development (Policy AQ-22) and to reduce GHG emissions to 1990 levels by the year 2020 through a mix of state and local action (Policy LU-115) (County of Sacramento 2011, Air Quality Element; County of Sacramento 2011, Land Use Element). The Sacramento County General Plan also includes policies aimed at reducing emissions from construction within the county, including Policy AQ-11, which encourages contractors operating in the county to procure and operate low-emission vehicles, and Policy AQ-19, which requires all feasible reductions in emissions for the operation of construction vehicles and equipment on major land development and roadway projects (County of Sacramento 2011, Air Quality Element).

The San Joaquin County General Plan Policy IS-3.9 states that the County shall encourage contractors to use reduced emission equipment for construction projects. San Joaquin County also seeks to promote and, in some cases, require sustainable building practices that incorporate a "whole system" approach to designing and constructing buildings that consume less energy, water, and other resources (Policy LU-2.5). In addition, San Joaquin County also seeks to reduce GHGs through Policy PHS-6.3, which promotes GHG emissions reductions and protecting grasslands, open space, oak woodlands, riparian forest, and farmlands from conversion to urban uses. (^San Joaquin County 2016.)

E.2.7 Geology and Soils

E.2.7.1 International Building Code

The International Building Code (IBC) establishes minimum requirements for nonresidential construction using prescriptive and performance-related provisions. The International Code Council

promulgates a new IBC every 3 years. In general, the IBC focuses on means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire, explosion, seismic, and other hazards. The IBC is intended to be adopted in accordance with the laws and procedures of a governmental jurisdiction. Some jurisdictions amend the code in the adoption process to reflect local practices and laws. The IBC is in use or adopted in all 50 U.S. states.

E.2.7.2 Federal Regulatory Design Codes for Buildings, Highways, and Other Structures

Federal standards establish minimum design criteria and construction requirements, including design of concrete and steel structures, levees, pipelines, buildings, pumping stations, excavation and shoring, grading, and foundations. Federal standards for minimum design regulate the construction of any buildings, highways, and other structures and include, but are not limited to, the following standards.

- American Society of Civil Engineers *Minimum Design Loads for Buildings and Other Structures*, ASCE-7-16, 2016.
- Federal Highway Administration (FHWA) *Seismic Retrofitting Manual for Highways Structures*, Parts 1 and 2, 2006.
- U.S. Army Corps of Engineers (USACE) (CESPK-ED-G), *Geotechnical Levee Practice*, SOP EDG-03, 2004.
- USACE *Design and Construction of Levees*, EM 1110-2-1913, 2000.
- USACE *Engineering and Design, Earthquake Design and Evaluation for Civil Works Projects*, ER 1110-2-1806, 2016.
- USACE *Engineering and Design – Earthquake Design and Evaluation of Concrete Hydraulic Structures*, EM 1110-2-6053, 2007.
- USACE *Engineering and Design – Response Spectra and Seismic Analysis for Concrete Hydraulic Structures*, EM 1110-2-6050, 1999.
- USACE *Engineering and Design – Stability Analysis of Concrete Structures*, EM 1110-2-2100, 2005.
- USACE *Engineering and Design – Structural Design and Evaluation of Outlet Works*, EM 1110-2-2400, 2003.
- USACE *Engineering and Design – Time-History Dynamic Analysis of Concrete Hydraulic Structure*, EM 1110-2-6051, 2003.
- USACE *Slope Stability*, EM 1110-2-1902, 2003.
- U.S. Department of the Interior and U.S. Geological Survey *Climate Change and Water Resources Management: A Federal Perspective*, Circular 1331.
- Federal levee vegetation policy.

USACE's levee vegetation policy provides that all vegetation, with the exception of grasses, should be removed from levees and from an additional zone of 15 feet from the toe of the levee. Beyond 15 feet of the water-side toe of a levee, the use of suitable vegetation, such as shrubby willows, is encouraged to moderate the erosive potential of water currents. The local sponsor of flood control

projects may, in certain instances, request a variance from the standard vegetation guidelines to further enhance environmental values or to meet state or federal laws and/or regulations. (75 Fed. Reg. 6364–6544.)

E.2.7.3 Liquefaction and Landslide Hazard Maps (Seismic Hazards Mapping Act)

The Seismic Hazards Mapping Act of 1990 (Pub. Resources Code, §§ 2690–2699.6) directs the California Geological Survey of the Department of Conservation to identify and map areas prone to earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the maps is to assist cities and counties in fulfilling their responsibilities for protecting public health and safety.

A development permit review is required for sites in the mapped seismic hazard zones. Site-specific geologic investigations and evaluations are carried out to identify the extent of hazards, and appropriate mitigation measures are incorporated in the development plans to reduce potential damage.

E.2.7.4 Alquist-Priolo Earthquake Fault Zones

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 (Pub. Resources Code, § 2621 et seq.). Similar to the Seismic Hazards Mapping Act, its main purposes are to identify known active faults in California and to prevent the construction of buildings used for human occupancy on the surface trace of active faults. A fault is considered active if it displays evidence of surface displacement during Holocene time (approximately during the last 11,000 years). The act directs the California Geological Survey to establish the regulatory zones, called Alquist-Priolo Earthquake Fault Zones, around the known surface traces of active faults and to publish maps showing these zones. Construction of buildings intended for human occupancy within the fault zone boundaries is strictly regulated, and site-specific faulting investigations are required.

E.2.7.5 State Regulatory Design Codes for Buildings, Highways, and Other Structures

State standards for minimum design regulate the construction of any buildings, highways, and other structures and include the following standards.

- American Association of State Highway and Transportation Officials (AASHTO) *Guide Specifications for LRFD [load and resistance factor] Seismic LRFD Bridge Design*, 2nd Edition, 2012.
- California Building Standards Code, 2020 (Cal. Code Regs., tit. 24).
- Caltrans *Seismic Design Criteria*, latest edition.
- California Department of Water Resources (DWR) Division of Safety of Dams *Guidelines for Use of the Consequence-Hazard Matrix and Selection of Ground Motion Parameters*, latest edition.
- DWR Division of Flood Management *FloodSAFE Urban Levee Design Criteria*, May 2012.
- Building and grading permits.

The California Building Standards Code (Cal. Code Regs., tit. 24) provides that no building or structure may be erected, constructed, enlarged, altered, repaired, moved, improved, removed, converted, or demolished unless a separate permit for each building or structure has first been obtained from the building official. Code requirements vary in different cities and counties around the state. Many projects will need to obtain a building permit from the local jurisdiction before construction can begin.

Many counties and local governments require grading permits before common construction activities are commenced. For example, in Placer County, the following common activities require a grading permit (Placer County 2022).

- Fill or excavation greater than 250 cubic yards.
- Cuts or fills exceeding 4 feet in depth.
- Structural retaining walls exceeding 4 feet in total height, as measured from the bottom of the footing to the top of the wall and/or supporting a surcharge.
- Soil or vegetation disturbances exceeding 10,000 square feet.
- Grading within or adjacent to a drainage course or wetland.
- Grading within a floodplain.

The requirement to obtain a grading permit is not standard across different jurisdictions, and project proponents will need to confirm with their local jurisdiction when they need a grading permit. For example, in Sacramento County, a grading permit is required if the project either grades, fills, excavates, stores, or disposes of 350 cubic yards or more of soil or earthly material or clears and grubs 1 acre or more of land (Sacramento County 2022)

The grading permit will generally require the project proponent to prevent major erosion (through selecting site-specific erosion control BMPs) and proper installation techniques. In Placer County, for example, the County in the grading permit application directs project proponents to the California Stormwater Quality Association's *Stormwater Best Management Practices Handbook* (California Stormwater Quality Association 2003) for construction. If a project proponent fails to implement erosion control BMPs, the County will issue a stop work notice until the violation is resolved.

E.2.7.6 Local Regulatory Framework

Earthwork and construction activities are regulated at the local jurisdictional level through a multistage permitting process. Grading permits are required for most types of earthwork, and additional permits are typically needed for various types of construction. Most jurisdictions have adopted either Uniform Building Code or California Building Code as minimum standards. Depending on the nature, extent, and location of proposed earthwork and construction, the permit process may require the preparation of a site-specific geotechnical investigation for the development of appropriate design criteria, assessing bedrock and Quaternary geology, geologic structure, soils, and previous history of excavation and fill placement. The process may also include information for the Alquist-Priolo Earthquake Fault Zoning Act, Seismic Hazards Mapping Act, and other local regulations. Before a development permit can be issued or a subdivision approved, cities and counties must require a site-specific investigation to determine whether a significant hazard

exists at the site and, if so, recommending measures to reduce the risk to an acceptable level. The investigation must be performed by state-licensed engineering geologists and/or civil engineers.

Cities and counties are required to include a safety element in their general plans, and that safety element must address geologic and seismic hazards (Gov. Code, § 65302(g)) and establish policies to minimize the loss of property and life as a result of earthquakes and geologic hazards.

Policies HS-1.2 and HS-1.3 of the Yolo County General Plan mandate that all development and construction proposals conform to applicable building standards and that environmental documents prepared in connection with CEQA address seismic safety issues and provide adequate mitigation for those hazards identified, respectively (Yolo County 2009). Further, as part of the implementation program for these policies, Yolo County requires a geotechnical analysis for construction in areas with potential geologic hazards and/or for the purposes of environmental analysis. The San Joaquin County General Plan requires that new developments consider the risk to human safety and property from seismic and geologic hazards (Policy PHS-3.1) (San Joaquin County 2016).

Many general plans also include provisions to protect soil resources. For example, the Sacramento County General Plan includes measures that encourage BMPs and appropriate soil conservation practices regularly utilized by farmers and ranchers, and curtailing of peat-rich Delta soils to retard erosion and subsidence to protect the agricultural productivity of Delta islands. (Policies CO-53 and CO-54) (County of Sacramento 2011, Conservation Element). Similarly, the City of Sacramento General Plan Policy ER 1.1.7 requires construction contractors to comply with Sacramento's erosion and sediment control ordinance and stormwater management and discharge control ordinance (City of Sacramento 2015, Environmental Resources Element).

E.2.8 Hazards and Hazardous Materials

E.2.8.1 Toxic Substances Control Act and Resource Conservation and Recovery Act

The Toxic Substances Control Act of 1976 (TSCA) (15 U.S.C. § 2601 et seq.) and the Resource Conservation and Recovery Act (RCRA) (42 U.S.C § 6901 et seq.) authorized USEPA to regulate the generation, transportation, treatment, storage and disposal of hazardous waste. The 1986 RCRA amendments (Federal Hazardous and Solid Waste Amendments) enabled USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances and addressed waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases.

Hazardous waste is regulated under subtitle C of RCRA. USEPA has developed a comprehensive program to ensure that hazardous waste is managed safely from the moment it is generated to its final disposal (cradle-to-grave). USEPA may authorize states to implement key provisions of hazardous waste requirements in lieu of the federal government, although USEPA retains enforcement authority. If a state program does not exist, USEPA directly implements the hazardous waste requirements in that state. California has such a program, which is administered by the Department of Toxic Substances Control (DTSC).

Nonhazardous solid waste is regulated under subtitle D of RCRA. Regulations established under subtitle D ban open dumping of waste and set minimum federal criteria for the operation of municipal waste and industrial waste landfills, including design criteria, location restrictions, financial assurance, corrective action (cleanup), and closure requirements. States play a lead role in

implementing these regulations and may set more stringent requirements. In the absence of an approved state program, the federal requirements must be met by waste facilities.

E.2.8.2 Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for federal regulation of pesticide distribution, sale, and use. All pesticides distributed or sold in the United States must be registered (licensed) by USEPA. FIFRA imposes pesticide labeling requirements; controls when and under what conditions pesticides can be applied, mixed, stored, loaded, or used; specifies when fields can be reentered after application; and identifies when crops can be harvested. USEPA is responsible for ensuring that a permitted pesticide, “when used according to USEPA-approved label directions, can be used with a reasonable certainty of no harm to human health and without posing unreasonable risks to the environment” (Shanahan 2013). Under FIFRA, registrations and labeling may restrict uses of pesticides. As a part of the pesticide registration, USEPA classifies the product, or some uses of the product, as “restricted use” if they may cause unreasonable adverse effects even when used as directed on the product labeling. Restricted use pesticides are limited to use by certified pesticide applicators.

E.2.8.3 Occupational Safety and Health Act

The Occupational Safety and Health Act of 1970 is intended to ensure worker and workplace safety by requiring employers to provide a place of employment free from recognized hazards to safety and health, such as heat or cold stress, unsanitary conditions, exposure to toxic chemicals, and mechanical dangers. OSHA is a division of the U.S. Department of Labor that oversees administration of the Occupational Safety and Health Act and enforces workplace health and safety standards in all 50 states.

Pursuant to the Occupational Safety and Health Act, employers are required to comply with safety and health standards as issued and enforced by either the federal OSHA or an OSHA-approved state plan. Section 5(a)(1) of the Occupational Safety and Health Act, the General Duty Clause, requires employers to provide their workers with a workplace free from recognized hazards likely to cause death or serious physical harm. OSHA requires special training of handlers of hazardous materials (including remediation of accidental releases), notification to employees who work in the vicinity of hazardous materials, and acquisition from the manufacturer of material safety data sheets. A material safety data sheet describes the proper use of hazardous materials and is intended to provide workers and emergency personnel with procedures for handling or working with that material. OSHA standards also address occupational noise exposure common in the construction industry. Noise exposure of this type is dependent on work conditions and is addressed through a facility’s or contractor’s health and safety plan.

E.2.8.4 California Occupational Safety and Health Act

The California Occupational Safety and Health Act of 1973, like the federal Occupational Safety and Health Act, is intended to ensure safe and healthful working conditions for employees. Cal/OSHA was created by the California Occupational Safety and Health Act to enforce workplace health and safety standards in the state. California’s occupational safety and health standards are identified and summarized in California Code of Regulations, title 8, chapter 3.2, *California Occupational Safety and Health Regulations*. These regulations, in addition to protecting worker health and safety, also indirectly protect the public by requiring construction managers to post warning signs; limit public

access to construction areas; and obtain permits for work considered to present significant health or safety risk to workers, such as work in tunnels under potentially hazardous conditions, working with explosives (e.g., blasting), and asbestos and lead abatement.

Section 3203 states that a workplace or construction sites must devise and implement an Injury and Illness Prevention Program for all employees within the organization. The following are required Injury and Illness Prevention Program elements.

- Responsibility (i.e., supervisors are responsible for all accidents on their job or under their supervision; supervisors are responsible for the inspection of work areas, equipment, and other potential accident-producing conditions daily).
- Compliance (i.e., supervisors must take disciplinary action when necessary to enforce safety rules and practices).
- Communication (i.e., company policy to maintain open communication between management and employees on matters pertaining to safety; company will provide current safety news and activities, safety reading materials, signs, posters, and/or a bulletin board and will hold regular safety meetings).
- Hazard Assessment (i.e., managers, supervisors, and employees will report any hazardous conditions or activities noted as a result of a formal weekly and/or monthly inspections or during daily routine operations to the appropriate job site foreman or superintendent).
- Accident/Exposure Investigation (i.e., each supervisor/foreman has a prominent role in promptly conducting an accident investigation and must collect the facts, determine the sequence of events that resulted in the accident, identify action to prevent recurrence, and provide follow-up to ensure that corrective action was effective).
- Hazard Correction (i.e., all hazards will be corrected as soon as identified, and a record of hazard abatement will be kept in the main office to track the steps taken to correct the hazardous condition).
- Training and Instruction (i.e., all new employees must undergo an initial orientation on job site safety rules and code of safe work practices; all employees must participate in scheduled safety meetings, which are conducted weekly by the site foreman on all job sites, and additional training as job duties or work assignments are expanded or changed).
- Recordkeeping (i.e., hazard reports, employee-training records, will be kept at the main office).

E.2.8.5 Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. The California Environmental Protection Agency and other state agencies set the standards for their programs, and local governments implement the standards. The Unified Program is implemented at the local level by Certified Unified Program Agencies (CUPA). For each county, the CUPA regulates and oversees the six programs.

- Hazardous Materials Business Plan Program
- California Accidental Release Prevention Program

- Aboveground Storage Tank Program
- Underground Storage Tank Program
- Hazardous Waste Generator Program
- California Uniform Fire Code

Aboveground and Underground Storage Tank Programs

The Aboveground Petroleum Storage Act, implemented by the Aboveground Storage Tank Program, requires tank facilities to develop and implement the Spill Prevention Control and Countermeasure Plan requirements (40 C.F.R. § 112). A *tank facility* is defined as a facility that stores 1,320 gallons or more of petroleum in aboveground storage tanks, including drums 55 gallons in size and larger. (Health & Saf. Code, § 25270.2(n).)

Any California business that stores hazardous substances in underground storage tanks (UST) must comply with Health and Safety Code, division 20, chapter 6.7, and the regulations in the California Code of Regulations, title 23, division 3, chapter 16. A *UST* is any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances that is substantially or totally beneath the surface of the ground. A permit is required from the local CUPA for the installation, repair, modification, or closure of the UST. The purpose of the Underground Storage Tank Program is to promote the early detection of release from USTs and reduce the potential for contamination of groundwater.

Hazardous Waste Generator Program

A hazardous waste generator (i.e., individual, business, or organization) has the responsibility of determining whether their waste is hazardous and is responsible for the safe handling, transport, and disposal of that waste (Health & Saf. Code, §§ 25100–25259). Generators who handle hazardous waste are inspected by the local CUPA for compliance with federal and state hazardous waste storage and disposal regulations at least once every 3 years.

E.2.8.6 Asbestos Standard for Construction

Cal/OSHA regulations prohibit asbestos emissions from demolition and construction activities, require medical examinations and monitoring of employees engaged in activities that could disturb asbestos, specify precautions and safe work practices to minimize the potential for release of asbestos, and require notice to federal and local government agencies before beginning demolition or construction activities that could disturb asbestos.

California Code of Regulations, title 8, section 1529, regulates asbestos exposure in all construction work as defined in section 1502, including but not limited to, the following.

- Demolition or salvage of structures where asbestos is present.
- Removal or encapsulation of materials containing asbestos.
- Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof that contain asbestos.
- Installation of products containing asbestos.
- Asbestos spill/emergency cleanup.

- Transportation, disposal, storage, containment of, and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed.
- Excavation that may involve exposure to asbestos as a natural constituent that is not related to asbestos mining and milling activities.
- Routine facility maintenance.
- Erection of new electric transmission and distribution lines and equipment, and alteration, conversion, and improvement of the existing transmission and distribution lines and equipment.

E.2.8.7 Hazardous Materials Transportation Act

The federal Hazardous Materials Transportation Act governs the transportation of hazardous materials. The U.S. Department of Transportation (USDOT), FHWA, and Federal Railroad Administration regulate the transport of hazardous materials at the federal level. The regulations under this act are promulgated by USDOT and enforced by USEPA. All hazardous material deliveries are tracked, and vehicles are required to use roadways approved for the transportation of hazardous materials.

Hazardous material is a substance that the Secretary of USDOT has determined is capable of posing an unreasonable risk to health, safety, or property when transported in commerce, and has designated as hazardous under title 49 United States Code section 5103 (49 C.F.R. § 171.8). Among the materials designated as hazardous are explosives; radioactive materials; infectious substances; flammable or combustible liquids, solids, or gases; toxic, oxidizing, or corrosive materials; and compressed gases in specific forms and quantities.

E.2.8.8 Inventory, Handling, and Release of Hazardous Materials

Health and Safety Code section 25500 regulates business and area plans relating to the inventory, handling, and release or threatened release of hazardous materials. Section 25531 implements the federal regulations under the Clean Air Act for the prevention of accidental releases of regulated substances, with certain state-specific amendments.

E.2.8.9 California Hazardous Waste Control Law

For the regulation of hazardous waste, the state is authorized to administer a hazardous waste program at least as stringent as the federal RCRA program. Generation, transportation, treatment, storage, and disposal of characteristic and listed hazardous wastes are regulated under the California Hazardous Waste Control Law. (Health & Saf. Code, §§ 25100–25250.28; Cal. Code Regs., tit. 22, § 66260.1 et seq.)

Health and Safety Code sections 25160–25166.5 regulate the transportation of hazardous waste. In California, it is unlawful to transport hazardous wastes unless specifically exempt or the person holds a valid registration issued by DTSC. Any person who transports hazardous waste in a vehicle must have a valid registration issued by DTSC in his or her possession while transporting the hazardous waste. The registration certificate must be shown upon demand to any representative of DTSC, any representative of a CUPA, any officer of the Department of the California Highway Patrol, any local health officer, or any public officer designated by DTSC.

E.2.8.10 Cortese Sites

Government Code section 65962.5(a) requires that DTSC compile and update a list, known as the “Cortese List,” of hazardous materials sites (Cortese sites). These sites consist of leaking USTs, solid waste facilities, landfills, and sites with potential or confirmed hazardous substance releases. The list provides valuable information to developers to prevent the rerelease of hazardous materials resulting from excavation or disturbance of hazardous materials by preventing unanticipated disturbance of these sites.

E.2.8.11 Transportation and Use of Explosives

The storage, transportation, handling, and use of explosives for blasting operations is regulated by the California Code of Regulations, title 8, articles 114, 115 and 116, respectively. Article 113, section 5238 provides an overview of the competencies and qualifications of blasters, including holding a current, valid California Blaster’s License in order to accomplish a blasting operation and/or direct and supervise others in such operation.

E.2.8.12 Food and Agricultural Code Sections 11401–14155

The California Legislature enacted Food and Agricultural Code sections similar to the USEPA FIFRA program to protect and promote the agricultural industry and to protect public health, safety, and welfare. Food and Agricultural Code sections 11401–14155, divisions 6 and 7 regulate pest control operations, application of pesticides, and applicators; restrict the use of some pesticides; and are implemented by the California Environmental Protection Agency, Department of Pesticide Regulation (DPR).

Under California law, DPR is responsible for administering the statewide pesticide regulatory program. Local administration of pesticide use enforcement is delegated to county agricultural commissioners (CAC). California law allows DPR to put special controls on pesticides designated as California restricted materials—limiting their use to trained individuals and then only at times and places approved by the state’s CACs. CACs regulate pesticide use to ensure that applicators comply with label directions and pesticide laws and regulations. CAC staff conduct inspections to prevent misapplication or drift and contamination of workers, the public, and the environment. Before a restricted pesticide can be purchased or used in California, the user must be certified and obtain a restricted materials permit. The major exception to the permit requirement, but not for certification, is structural pest (e.g., termites) control.

Restricted pesticide use permit applications must identify the areas to be treated, their location and size, crops or commodities, pest problems, names of restricted pesticides to be applied, and application method. If a permit applicant has several locations in a county, they can all be covered with a single permit as long as each location is clearly identified and described. The permit application must also include a map or description of the surrounding area showing any places that could be harmed by pesticides. These areas could include rivers, schools, hospitals, endangered species habitats, and nearby susceptible livestock or crops. Since permits are typically issued for a year and it is not possible (or desirable) to schedule pesticide treatments months in advance, applicants must let the CAC know each time they plan to use any of the restricted materials on their permit. They do this by filing a Notice of Intent to Apply a Restricted Material. The Notice of Intent is the second part of the permit process and is submitted to the CAC at least 24 hours prior to the scheduled treatment.

E.2.8.13 Fire Hazard Severity Zones

In accordance with Public Resources Code sections 4201 to 4204 and Government Code sections 51175 to 51189, 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 in these areas.

E.2.8.14 Safe, Efficient Use and Preservation of Navigable Airspace

In administering 14 Code of Federal Regulations part 77, Safe, Efficient Use and Preservation of Navigable Airspace, the prime objectives of the Federal Aviation Administration (FAA) are to promote air safety and the efficient use of navigable airspace. Proponents of projects near an airport must provide the FAA with a Notice of Proposed Construction or Alteration for review prior to initiating construction if, for example, the project would include any construction or alteration exceeding 200 feet above ground level or any construction or alteration that would exceed an imaginary surface extending outward and upward at a slope of 100:1 (1 foot upward per 100 feet horizontally), for a horizontal distance of 20,000 feet, 50:1 for a horizontal distance of 10,000 feet, or 25:1 for a horizontal distance of 5,000 feet from the nearest point of the nearest runway of airports described in paragraph (d) of section 77.9.

Pursuant to the review, the FAA determines how the proposal would affect the air navigation. These FAA determinations about the appropriate height of buildings, wind turbines, and meteorological towers near airports, and how they are lighted and marked, contribute to safe air navigation.

E.2.8.15 State Aeronautics Act

The State Aeronautics Act (Pub. Util. Code, § 21001 et seq.) authorizes Caltrans and local governments to protect navigable airspace and prohibits the construction of any structure or permitting any natural growth of a height that would constitute a hazard to air navigation unless Caltrans first issues a permit (Pub. Util. Code, § 21659). The permit is not required if the FAA has determined that the structure or growth does not constitute a hazard to air navigation or would not create an unsafe condition for air navigation.

Caltrans requires notification, in writing, for proposed construction of any state building or enclosure within 2 miles of any airport before an agency acquires title to the property for the building or enclosure or for an addition to an existing site (Pub. Util. Code, § 21655). Caltrans would respond with a written investigation report of the proposed site and provide recommendations, as necessary, to reduce potential hazards to air navigation.

E.2.8.16 Airport Land Use Compatibility Plan

Public Utilities Code section 21675(a) requires the preparation of an airport land use compatibility plan (ALUCP) for each public use airport in California. An ALUCP is designed to encourage compatible land uses in the area surrounding an airport and provides for the “orderly growth of each public airport and the area surrounding the airport” while safeguarding “the general welfare of the inhabitants within the vicinity of the airport and the public in general.” (Pub. Util. Code, § 21675(a).) The ALUCP contains criteria for making consistency determinations, including building standards and height and land use restrictions.

E.2.8.17 Mosquito and Vector Control

In California, mosquito and vector control services are provided by mosquito and vector control districts (MVCD), pest abatement districts, and other county departments and local government agencies. The entities, which are collectively referred to as *vector control agencies*, are overseen and regulated primarily by the California Department of Public Health (CDPH). In addition to having the authority to conduct surveillance for vectors, prevent the occurrence of vectors, and abate production of vectors (Health & Saf. Code, § 2040), MVCDs 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 related to vector production (Health & Saf. Code, § 2041). Further, MVCDs have authority to abate a public nuisance related to mosquito production by notifying the owner of the property that is causing the public nuisance, requiring the owner of the property to abate the nuisance within a specified time, and requiring the owner of the property to prevent the recurrence of the public nuisance (Health & Saf. Code, §§ 2060–2065). Health and Safety Code section 2061 authorizes the MVCDs to impose fines for noncompliance, and section 2065 requires the property owner to pay for the cost of abating the public nuisance and any necessary actions to prevent the recurrence of the public nuisance.

Mosquito abatement can include physical, biological, and chemical control methods. The CDPH in collaboration with the Mosquito Vector Control Association of California developed a “best management practices” plan to promote mosquito control on California properties, *Best Management Practices for Mosquito Control in California*. This plan describes mosquito control BMPs to be implemented by property owners and managers to reduce mosquito populations through a variety of ways, including reducing or eliminating breeding sites, increasing the efficacy of biological control, and decreasing the amount of pesticides applied while increasing the efficacy of chemical control measures (CDPH and MVCAC 2012). Vector control agency staff who are responsible for mosquito abatement undergo training and certification in the proper use of pesticides for mosquito control. DPR also continues monitoring pesticide use and risk as part of its ongoing programs to assess effectiveness and need for change.

E.2.8.18 Local Regulatory Framework

General plans often include policies that guide the handling and disposal of hazardous materials and hazardous wastes. For example, the Sacramento County General Plan includes policies requiring that the handling, storage, and transport of hazardous materials be conducted in a manner so as not to compromise public health and safety standards (Policy HM-4). Sacramento County also has policies aimed at continuing the effort to prevent groundwater, surface water, and soil contamination (Policies HM-8 and HM-9). (County of Sacramento 2011, Hazardous Materials Element)

Similarly, the San Joaquin County General Plan includes policies requiring businesses that use or store materials on site to prepare a hazardous materials management plan and requires that all new development be consistent with the County hazardous waste management plan (Policies PHS-7.6 and PHS-7.8) (^San Joaquin County 2016).

E.2.9 Hydrology and Water Quality

E.2.9.1 Clean Water Act

The federal Water Pollution Control Act Amendments of 1972, also known as the Clean Water Act, established the institutional structure for 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. In California, the State Water Board has been designated by USEPA to develop and enforce water quality objectives and implementation plans. The State Water Board has delegated the specific responsibilities for the development and enforcement actions to the regional water boards.

Basin Plans and Water Quality Objectives

The State Water Board and regional water boards formulate and adopt water quality control plans (WQCPs or basin plans) that designate the beneficial uses of water to be protected within an area and establish water quality objectives to reasonably protect beneficial uses and a program of implementation to meet the objectives. The basin plan contains specific numeric water quality objectives that are applicable to certain waterbodies or portions of waterbodies. Numerical objectives have been established for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity (an indirect method to determine salinity), total dissolved solids, temperature, turbidity, and trace metals. The basin plan also contains narrative water quality objectives for certain parameters that must be attained through pollutant control measures and watershed management. The State Water Board and regional water boards implement the basin plans through regulatory programs and permits that control discharges of wastes from wastewater treatment facilities, industrial facilities, urban areas, irrigated agricultural lands, dredging operations, and other sources of pollution.

Water quality objectives for sediment and turbidity provide that sediment load and discharge rate shall not be altered in a way that would cause nuisance or adversely affect beneficial uses. In the San Francisco Bay Basin Plan, increases in turbidity are constrained to less than 10 percent in areas where the natural turbidity is already greater than 50 nephelometric turbidity units (^San Francisco Bay Water Board 2019). Water quality factors shall not cause a detrimental increase in the concentrations of toxic pollutants in sediment or aquatic life. The Central Valley Basin Plan contains a more specific tiered system with allowable turbidity increases based upon the natural turbidity of the surface water with exceptions during dredging operations (^Central Valley Water Board 2018b).

Section 402: National Pollutant Discharge Elimination System

Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point source discharges of pollutants into waters of the United States. An NPDES permit sets specific discharge limits for point sources discharging pollutants into waters of the United States and establishes monitoring and reporting requirements, as well as special conditions. Typically, NPDES permits are issued for a 5-year period by the regional water boards.

The State Water Board and regional water boards implement multiple stormwater permitting programs, including a statewide stormwater permitting program for construction projects. Dischargers whose projects disturb 1 or more acres of soil or whose projects disturb less than 1 acre

but are part of a larger common plan of development that in total disturbs 1 or more acres are required to obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order 2022-0057-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit also covers certain nonstormwater discharges, including water to control dust and uncontaminated groundwater dewatering; a separate general permit for dewatering discharges may be required by some regional water boards.² The Construction General Permit requires the development of a site-specific Stormwater Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. The SWPPP identifies specific types and sources of potential stormwater pollutants, determines the location and nature of potential impacts on stormwater due to the project, and specifies appropriate control measures to minimize or avoid any potentially significant impacts from stormwater runoff on receiving waters. The SWPPP must identify an effective combination of soil erosion and sediment controls. The SWPPP will require treatment BMPs that incorporate, at a minimum, the required hydraulic sizing design criteria for volume and flow to treat projected stormwater runoff. In addition, the SWPPP includes measures to prevent and respond to spills and leaks, as well as measures for disposing of materials contaminated by spills. Stormwater discharges are authorized after obtaining coverage under the permit. Coverage under the general permit is obtained by submitting required documentation and fees to the State Water Board.

Section 404: Permits for Fill Placement in Waters and Wetlands

Section 404 of the Clean Water Act requires that an entity obtain permits from USACE before discharging dredge or fill material into navigable waters of the United States, 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.

An individual or standard permit is issued when projects have more than minimal individual or cumulative impacts, are evaluated using additional environmental criteria, and involve a more comprehensive public interest review. A general permit is issued for structures, work, or discharges that will result in only minimal adverse effects. There are three types of general permits—nationwide permits, regional general permits, and programmatic general permits. General permits are usually valid for 5 years and may be reauthorized by USACE. Nationwide permits are issued on a national basis and are designed to streamline USACE’s authorization of projects such as commercial developments, utility lines, or road improvements that produce minimal impact on the nation’s aquatic environment. A regional general permit is issued for a specific geographic area by an individual USACE district. Each regional general permit has specific terms and conditions, all of which must be met for project-specific actions to be verified. Programmatic general permits are based on an existing state, local, or other federal program and designed to avoid duplication of that

² The Central Valley Regional Water Board currently regulates limited threat discharges to surface water through a 5-year General Order R5-2016-007-01 (NPDES No. CAG995002). Eligible discharge types include (but are not limited to) well-water development, construction dewatering, well/pump testing, and pipeline/tank pressure testing. Eligible discharge types are enrolled in a tier based on the results of analytical sampling of the proposed wastewater. Low-threat discharges to land instead of surface water are regulated under the State Water Board’s statewide general order for discharges to land with low-threat water quality, Water Quality Order No. 2003 – 0003 – DWQ.

program. A state programmatic general permit is a type of permit that is issued by USACE and designed to eliminate duplication of effort between USACE districts and state regulatory programs that provide similar protection to aquatic resources. In some states, the state programmatic general permit replaces some or all of the USACE nationwide permits, which results in greater efficiency in the overall permitting process.

Section 401: Water Quality Certification

Under federal law, section 401 of the Clean Water Act (33 U.S.C. § 1341) requires every applicant for a federal license or permit that may result in a discharge into navigable waters to obtain water quality certification from the state that the project or activity will comply with water quality standards and any other appropriate requirement of state law. (33 U.S.C. §§ 1313, 1341(d).) This includes Porter-Cologne Water Quality Control Act and other state requirements protecting surface waters from both point source and nonpoint source discharges of pollution. (33 U.S.C. § 1313.) Sections 401 and 404 of the Clean Water Act typically applies to dredge-and-fill activities in wetlands and other waters that require permits from USACE or hydropower projects seeking a license from the Federal Energy Regulatory Commission. Most water quality certifications are issued by the regional water boards; however, the State Water Board issues water quality certifications for projects that may fall under the jurisdiction of more than one regional board, hydroelectric facilities regulated by the Federal Energy Regulatory Commission, and other projects that involve diversion of water and water rights. (Cal. Code Regs., tit. 23, § 3855.)

E.2.9.2 Porter-Cologne Water Quality Control Act

In California, discharges of waste that are not NPDES “discharges of pollutants” require the issuance of WDRs unless otherwise waived. Discharges of waste that are not subject to NPDES permits typically include runoff from nonpoint sources, such as agricultural and timber harvest activities and associated waste discharges, to land or to groundwater. WDRs prescribe requirements, such as limitations on temperature, toxicity, or pollutant levels, as to the nature of any discharge. (Wat. Code, § 13260, subd. (a).) WDRs may also specify conditions where no discharge will be permitted (*Id.*, § 13241) and may include monitoring and reporting requirements. (See *id.*, § 13267; Cal. Code Regs., tit. 23, § 2230.) WDRs implement basin plans, taking into consideration the beneficial uses to be protected and water quality objectives reasonably required for that purpose, other waste discharges, and the need to prevent nuisance. (Wat. Code, § 13263, subd. (a).) Other existing regulatory tools available to the State Water Board or regional water boards include individual or general waivers of WDRs, basin plan prohibitions, and enforcement actions.

Any person who discharges or proposes to discharge any waste that could affect the quality of the waters of the state must file a report of waste discharge with the appropriate regional water board. *Waste* includes all waste substances associated with human habitation; of human or animal origin; or from any producing, manufacturing, or processing operation. (Wat. Code, § 13050(d).) Upon receipt of a report of waste discharge, the regional water board may then issue WDRs designed to ensure compliance with applicable water quality objectives and other requirements of the basin plan.

On April 2, 2019, the State Water Board adopted the *State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2021) to protect wetlands and other environmentally sensitive waterways throughout the state. This wetland definition provides a common, statewide definition of what constitutes a wetland

and provides for consistency in the way the State Water Board and regional water boards regulate activities to protect wetlands and other waterways.

E.2.9.3 Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems

The Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy) establishes a statewide, risk-based, tiered approach for the regulation and management of on-site wastewater treatment system installations and replacements. The OWTS Policy sets standards for on-site wastewater treatment systems that are constructed or replaced, that are subject to a major repair, that pool or discharge waste to the ground's surface, and that have affected or will affect groundwater or surface water such that it is unfit for drinking water or other uses or causes a health or other public nuisance condition. The OWTS Policy also includes minimum operating requirements for on-site wastewater treatment systems that may include siting, construction, and performance requirements; requirements for on-site wastewater treatment systems near certain waters listed as impaired under section 303(d) of the Clean Water Act; requirements authorizing local agency implementation of the requirements; corrective action requirements; minimum monitoring requirements; exemption criteria; requirements for determining when an existing on-site wastewater treatment system is subject to major repair, and a conditional waiver of WDRs.

The regional water boards are responsible for implementation of the OWTS Policy. The OWTS Policy also assigns responsibilities to on-site wastewater treatment system owners, local agencies that issue on-site wastewater treatment system permits, and the State Water Board (SWRCB and Regional Water Boards 2012).

E.2.9.4 California Water Rights

In California, water rights law is administered by the State Water Board, Division of Water Rights. The State Water Board is the only agency with authority to administer water rights in California. The State Water Board shares the authority to enforce water right laws with the state courts.

California recognizes both riparian and appropriative rights. Riparian rights are conferred with the ownership of land contiguous to a watercourse and do not require a permit or license from the State Water Board. Appropriative rights are conferred when one diverts and applies water to beneficial use, with a priority date when water was first applied. Appropriative water rights after 1914 are subject to a permitting process at the State Water Board. The process involves an application and notice, protests, protest resolution or hearing, and ultimately the issuance of a permit followed by a license. Diversion and use of water under a post-1914 appropriative water right must be in conformance with the terms and conditions in the permit or license.

The State Water Board processes change petitions filed by a water right holder to change a point of diversion, place of use, and purpose of use. (Wat. Code, §§ 1700–1706.) Before approving a petition submitted pursuant to Water Code section 1700, the State Water Board must find that the proposed change will neither in effect initiate a new right nor injure any other legal user of water. (Cal. Code Regs., tit. 23, § 791.) Under Water Code section 1707, the State Water Board may approve a change for purposes of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in, on, or on the water. (Wat. Code, § 1707.) The State Water Board must find that the proposed change will not increase the amount of water the person is entitled to use, will not unreasonably affect any

legal user of water, and otherwise meets the requirements of the Water Code. (Wat. Code, § 1707.) Processing these changes can protect the flows from subsequent diversions downstream. The Division of Water Rights also processes petitions to transfer water, which involves the temporary and long-term exchange of water within the State of California. (Wat. Code, §§ 1725, 1735.)

All water rights are subject to the common law principle, codified in article X, section 2 of the California Constitution, which prohibits “waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.” What constitutes a waste is relative, based on competing needs, and the determination may change as conditions change. Use or method of diversion may be unreasonable based on its impact on fish, wildlife, or other instream beneficial use. In addition, all water rights are subject to the public trust doctrine. In regulating water use, the State must consider the public trust and protect the public trust when feasible. Even after an appropriation has been acquired, the public trust imposes a duty of continuing supervision.

E.2.9.5 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act was adopted by the California Legislature in 2014 (Wat. Code, §§ 10720–10738); it provides a statewide framework to help protect groundwater resources over the long-term. Local agencies form groundwater sustainability agencies for high- and medium-priority groundwater basins. They also develop and implement groundwater sustainability plans to avoid undesirable results and mitigate overdraft within 20 years. DWR oversees the program, evaluates plans for adequacy, identifies basins subject to critical overdraft, and publishes BMPs for groundwater management.

E.2.9.6 Rivers and Harbors Act of 1899

Sections 9 and 10 of the Rivers and Harbors Act of 1899 (Rivers and Harbors Act) authorize USACE to regulate the construction of any structure or work over, under, or within; excavation of material from; and deposition of material into navigable waters of the United States. *Navigable waters of the United States* are 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.

The Rivers and Harbors Act authorizes USACE to regulate the construction of infrastructure, such as wharves, breakwaters, or jetties; bank protection or stabilization projects; permanent mooring structures or marinas; intake or outfall pipes; canals; boat ramps; aids to navigation; or other modifications affecting the course, location condition, or capacity of navigable waters.

E.2.9.7 Executive Order 11988: Floodplain Management

Executive Order 11988 charged federal agencies with floodplain management responsibilities when planning/designing federally funded projects or when considering any permit applications for which a federal agency has review and approval authority. Federal agencies include the Federal Emergency Management Agency (FEMA) and USACE.

E.2.9.8 Flood Zone Regulations

Special Flood Hazard Areas are subject to federal and state requirements, which are defined primarily by federal regulations at 44 Code of Federal Regulations section 60.3 and 44 Code of Federal Regulations section 65.12. These federal regulations are intended to address the need for

effective floodplain management and provide assurance that the cumulative effects of floodplain encroachment do not cause more than a 1-foot rise in water surface elevation after the floodplain has been identified on the Flood Insurance Rate Maps. Most construction activities within a regulated floodway or floodplain require coordination with FEMA and the local floodplain administrator. These activities include, but are not limited to, new building construction, existing building expansion, clearing land, placing fill, grading land, mining, dredging, drilling, and placement of mobile homes.

State agencies include DWR and the Central Valley Flood Protection Board (CVFPB). Local agencies include flood control, reclamation, and levee districts and counties and cities. The CVFPB manages 1,600 miles of levees, weirs, and channels; and it manages encroachments on the State Plan of Flood Control through a comprehensive permitting, enforcement, and inspection program. It coordinates with USACE and local agencies. The Central Valley Flood Protection Plan is California's strategic blueprint to improve flood risk management in the Central Valley. The plan includes strategies to prioritize investment in flood management, promote multi-benefit projects, and integrate ecosystem functions into flood-risk-reduction projects.

E.2.9.9 Local Regulatory Framework

Water quality and hydrology are regulated at the local level (counties and cities) through the general plans and county codes (water-specific ordinances). Most county general plans in the state provide goals and policies related to water service and water resources. Local general plans often include policies designed to protect water quality. For example, the Sacramento County General Plan includes policies that encourage the use of low-impact design techniques to improve water quality runoff and erosion control, infiltration, groundwater recharge, and more (Policy CI-65) (County of Sacramento 2011, Circulation Element). Similarly, the San Joaquin County General Plan supports cooperative, regional groundwater management planning by local water agencies, water users, and other affected parties to ensure a sustainable, safe, and economically viable groundwater supply for existing and future users within the county (Policy IS-4.9) (^San Joaquin County 2016). The San Joaquin County General Plan also includes policies specifically aimed at protecting and improving the quality and quantity of water in the Delta region (Policy D-6.1) (^San Joaquin County 2016).

The Contra Costa County General Plan Public Facilities/Services Element includes the following provisions applicable to project construction: water service agencies should generally be discouraged from constructing new water distribution infrastructure that exceeds future water needs based on the buildout projections of the County General Plan and city general plans (Policy 7-18); the County shall cooperate with other regulatory agencies to control point and nonpoint water pollution sources to protect adopted beneficial uses of water (Policy 7-23); land uses and activities that could result in contamination of groundwater supplies shall be identified, monitored, and regulated to minimize the risk of such contamination (Policy 7-25); gabion-type construction, instead of extensive riprap or concrete lining, is encouraged to stabilize creek banks (Implementation Measure 7-aa); and utilize check dams and drop structures to control erosion within natural watercourses, where creek capacity and bank stability permits (Implementation Measure 7-ab) (^Contra Costa County 2005, Public Facilities/Services Element). The Conservation Element of the Contra Costa County General Plan contains a goal to “maintain the ecology and hydrology of creeks and streams and provide an amenity to the public, while at the same time preventing flooding, erosion and danger to life and property” (Goal 8-U) and a policy to “[p]reserve watersheds and groundwater recharge areas by avoiding the placement of potential pollution

sources in areas with high percolation rates” (Policy 8-74) (^Contra Costa County 2005, Conservation Element).

E.2.10 Land Use and Planning

E.2.10.1 The Federal Land Policy and Management Act

The Federal Land Policy Management Act (FLPMA) (1976; 43 U.S.C. § 1701 et seq.) established public land policy and guidelines for its administration and provides for the management, protection, development, and enhancement of public lands administered by BLM. Pursuant to the FLPMA, BLM must periodically inventory public lands and their resources and develop resource management plans. Resource management plans are used by BLM to allocate resources and determine appropriate multiple uses for the public lands; develop strategies to manage and protect resources; and establish systems to monitor and evaluate the status of resources and the effectiveness of management practices over time.

FLPMA authorizes BLM to grant rights-of-way for the generation, transmission, and distribution of electric energy. BLM will not issue a right-of-way unless the proposed project conforms to the current resource management plan. If the project does not conform to the resource management plan, the project must be restructured, or the resource management plan must be amended. Generally, new transmission or solar projects sited on BLM-managed land require an amendment, not a revision. An amendment is initiated when a proposed action requires a change in terms, conditions, and decisions of the approved resource management plan. The amendment process is tailored to the anticipated level of public interest and potential for significant impacts.

E.2.10.2 Coastal Zone Management Act

The U.S. Congress recognized the importance of meeting the challenge of continued growth in the coastal zone by passing the Coastal Zone Management Act in 1972. The Coastal Zone Management Act, administered by the National Oceanic and Atmospheric Administration’s Office of Ocean and Coastal Resource Management, provides federal incentives for states to manage and protect their coastal resources.

The Coastal Zone Management Act requires all applicants for federal permits and licenses and all federal agencies proposing to undertake specified activities in the coastal zone that may directly or indirectly affect coastal resources to obtain certification from the state’s designated coastal zone program management agency that the proposed project is consistent with the state’s approved coastal zone management program. California has an approved coastal zone management program. The California Coastal Commission is designated as the lead state agency responsible for implementing and enforcing California’s program statewide, and the San Francisco Bay Conservation and Development Commission is the designated agency for the San Francisco Bay Area, including San Pablo Bay and Suisun Marsh.

Coastal cities and counties also must adopt local coastal programs (LCPs) to guide development in the coastal zone by establishing land use, development, natural resource protection (including scenic resources), coastal access, and public recreation policies. The California Coastal Act of 1976 governs the decisions of the California Coastal Commission and outlines standards for development within the coastal zone, including setting requirements for LCPs. LCPs specify the appropriate location, type, and scale of new or changed uses of land and water. LCPs include a land use plan and

measures, such as zoning ordinances, which are used to implement the plan. These programs conform to California Coastal Act requirements while meeting the unique needs of cities and counties. Cities and counties can amend their LCPs as needed. Once adopted by the city council or county board of supervisors, the LCP or the LCP amendment is submitted to the California Coastal Commission to be reviewed for consistency with California Coastal Act requirements.

E.2.10.3 State Parks Land

The California state park system contains over 280 classified units and major unclassified properties and encompasses over 1.6 million acres (State Parks n.d.). Public Resources Code section 5002.2 requires that State Parks prepare a general plan or revise an existing plan prior to the development of any new facilities that may result in the permanent commitment of a resource of a unit. Any development on State Parks land is subject to the requirements of CEQA (Pub. Resources Code, §§ 21000–26000). A general plan is the primary management document for a unit of the California state park system and defines “a framework for resource stewardship, interpretation, facilities, visitor use, and operations” (State Parks 2010).

E.2.10.4 The Delta Plan

The Delta Plan, a comprehensive, long-term management plan for the Delta required by the Delta Reform Act (2009), sets forth rules and recommendations to further the state’s coequal goals for the Delta of water supply reliability and protection and restoration of the Delta ecosystem. The Delta Plan contains 14 regulatory policies with which state and local agencies are required to comply. An action by a state or local agency that falls under the jurisdiction of the Delta Stewardship Council is a *covered action* under the Delta Reform Act and is defined as follows.

“... a plan, program, or project as defined pursuant to Section 21065 of the Public Resources Code that meets all of the following conditions:

Will occur, in whole or in part, within the boundaries of the Delta or Suisun Marsh;

Will be carried out, approved, or funded by the state or a local public agency;

Is covered by one or more provisions of the Delta Plan;

Will have a significant impact on the achievement of one or both of the coequal goals or the implementation of government-sponsored flood control programs to reduce risks to people, property, and state interests in the Delta.”

(Wat. Code, § 85057.5(a).)

The state or local agency that is proposing to carry out, approve, or fund a plan, program, or project must determine whether it is a covered action. If it is determined to be a covered action, the agency is required to submit written certification (“certification of consistency”) to the Delta Stewardship Council, demonstrating that the covered action is consistent with the Delta Plan. If the agency determines that the proposed plan, program, or project is not a covered action and that determination is made in good faith, is reasonable, and is consistent with the Delta Reform Act and the Delta Plan, it will not be subject to the Delta Stewardship Council’s regulatory review but will be subject to judicial review.

The Delta Stewardship Council does not have direct review and approval authority over covered actions to determine whether they are consistent with the Delta Plan but has appellate authority to determine whether the action is consistent if the certification of consistency is challenged via an appeal.

Certain actions, such as regulatory actions or routine maintenance and operations of the State Water Project and Central Valley Project, are statutorily exempt, as are ministerial or emergency projects. (Pub. Resources Code, § 210800 (b)(1).)

E.2.10.5 Local Regulatory Framework

Cities and counties in California have primary responsibility for land use control and regulation within their areas of jurisdiction. State planning and zoning law requires all California counties and incorporated cities to prepare, adopt, and implement a comprehensive general plan to guide the community's growth and development. The land use elements of the general plans address future development of land for residential, recreation, conservation, and open space uses.

City and county zoning ordinances establish building codes and land use regulations. Zoning ordinances define how specific geographic zones can be used (e.g., industrial, residential, commercial) consistent with established city and county general plans. Land development must be consistent with zoning, and many construction projects will need to comply with the local jurisdiction's general plan and zoning. If a proposed project is inconsistent with a zoning for a specific area, often a zoning variance permit may be granted.

The land use changes in the Sacramento County General Plan prioritize residential and commercial development on vacant land existing within urban areas (Policies LU-4 and LU-6), and the County will support conversion of excess or vacant sites (Policy LU-101) to protect important farmlands and open space, which is one of the agricultural land use objectives (County of Sacramento 2011, Land Use Element).

Contra Costa County's growth management policies are required to be met prior to new development within unincorporated areas of the county. The County also encourages infill of already developed areas and discourages urban services extending into agricultural areas outside the urban limit line (Policies 3-8 and 3-10). The Contra Costa County General Plan states that new residential development shall be accommodated only in areas where it will avoid creating unmitigated adverse impacts on the environment and existing community (Policy 3-28). The specific implementation measures include reviewing proposed land development projects for consistency with policies outlined in the general plan to carry out and meet the county's land use goals (Implementation Measure 3-d). (^Contra Costa County 2005, Land Use Element)

E.2.11 Mineral Resources

E.2.11.1 Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (Cal. Code Regs., tit. 14, div. 2, ch. 8, subch. 1) requires the State Mining and Geology Board to adopt policies that regulate the operation of surface mines, reclamation of mined lands, and conservation of mineral resources.

In accordance with the Surface Mining and Reclamation Act, the State of California established the Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and nonfluid mineral fuels. Economically significant mineral deposits are classified based on the known and inferred mineral resource potential of the land, using

the California Mineral Land Classification System, which includes the following four mineral resource zones (MRZ).

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated.
- MRZ-4: Areas where available information is inadequate for assignment to any other zone.

The California Geologic Energy Management Division (CalGEM) prioritizes protecting public health, safety, and the environment in its oversight of the oil, natural gas, and geothermal industries, while working to help California achieve its climate change and clean energy goals. To do that, CalGEM uses science and sound engineering practices to regulate the drilling, operation, and permanent closure of energy resource wells. CalGEM is responsible for implementing Public Resources Code section 3208.1 and has developed the Construction Site Well Review Program to assist local permitting agencies in identifying and reviewing the status of oil or gas wells located near or beneath proposed construction projects. Before issuing building or grading permits, local permitting agencies review and implement CalGEM's preconstruction well requirements. Interaction between local permitting agencies and CalGEM helps resolve land use issues and allows for responsible development in oil and gas fields.

E.2.12 Noise

E.2.12.1 State of California General Plan Guidelines

The State of California General Plan Guidelines provide guidance regarding the acceptability of projects within specific day-night average sound level (Ldn) contours. The document does not present an adopted standard; rather, it provides guidelines for cities and counties to use in developing their own standards. Generally, residential uses are acceptable in areas where exterior noise levels do not exceed 60 A-weighted decibels (dBA) Ldn. Residential uses are normally unacceptable in areas where exterior noise levels exceed 70 dBA Ldn, and conditionally acceptable in areas where levels are in the range of 55–70 dBA Ldn. Schools are normally acceptable in areas with exterior noise levels up to 70 dBA Ldn, and normally unacceptable in areas with levels exceeding 70 dBA Ldn. Commercial uses are normally acceptable in areas with exterior noise levels up to 70 dBA community noise equivalent level. Levels between 67.5 and 77.5 dBA Ldn for commercial uses are conditionally acceptable, depending on the noise insulation features and the noise reduction requirements. The guidelines also present adjustment factors that may be used to determine noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. (OPR 2017.)

E.2.12.2 Occupational Noise

As described in Section E.2.8, *Hazards and Hazardous Materials*, California's occupational safety and health standards are identified and summarized in California Code of Regulations, title 8. Sections 5095–5100 establish requirements for controlling occupational exposures to noise. Agriculture, construction, and oil and gas well drilling and servicing operations are exempt from the

provisions of sections 5097 through 5100. Section 5096 establishes the exposure limits for noise and provides that, when employees are subjected to sound levels exceeding permissible noise levels and durations, feasible administrative or engineering controls shall be utilized; and if these controls fail, hearing protection devices shall be provided by the employer and used to reduce noise exposure.

E.2.12.3 Local Regulatory Framework

Local jurisdictions may use other noise standards. Government Code section 65302, subdivision (f) requires city and county general plans to include a noise element. The noise element of county general plans typically establishes acceptable noise level criteria for transportation and stationary noise sources to guide future development and reduce land use conflicts. For example, the Solano County General Plan has defined noise performance standards for nontransportation noise sources according to the receiving land use. For land uses such as hospitals, nursing homes, churches, schools, and libraries, the average acceptable daytime noise range is 55–75 dBA; for residential land use, the standard range is 55–70 dBA. The acceptable average daytime noise range for commercial and industrial land uses ranges from 55 to 80 dBA depending on the specific land use (Solano County 2008). The San Joaquin County General Plan also includes a requirement that construction projects anticipated to generate a significant amount of vibration ensure acceptable interior vibration levels at nearby vibration-sensitive uses based on Federal Transit Administration criteria (Policy PHS-9.4) (San Joaquin County 2016).

In addition, city and county codes typically establish noise standards to limit the allowable noise level(s) at different times of day for different zoned areas (i.e., residential, commercial, industrial). For example, Sacramento County Code section 6.68, Noise Control, states that exterior noise shall not exceed 50 dBA between 10:00 p.m. and 7:00 a.m. and 55 dBA between 7:00 a.m. and 10:00 p.m. for residential and agricultural areas. Construction activities between the hours of 6:00 a.m. and 8:00 p.m. Monday through Friday and 7:00 a.m. and 8:00 p.m. on weekends are exempt from this ordinance.

E.2.13 Recreation

E.2.13.1 California Division of Boating and Waterways

The California Division of Boating and Waterways' mission is to provide safe and convenient public access to California's waterways and leadership in promoting the public's right to safe, enjoyable, and environmentally sound recreational boating (CDBW 2018). In addition to other responsibilities, the California Division of Boating and Waterways assists local boating law enforcement agencies. Section E.2.14, *Transportation and Traffic*, further discusses the regulatory framework for waterway safety and navigation.

E.2.13.2 Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act of 1968, as amended (Pub. L. 90-542; 16 U.S.C. §§ 1271–1287), established the National Wild and Scenic Rivers System. The system identifies distinguished rivers of the nation that possess remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. The Wild and Scenic Rivers Act preserves the free-flowing condition of rivers that are designated and protects their local environments. Section 5(d)(1) of the act requires that all federal agencies, when planning for the use and development of water and related

land resources, consider potential national wild, scenic, and recreational river areas, which are defined as follows (National Wild and Scenic Rivers System 2022).

- **“Wild” river areas**—Those rivers or sections of rivers that are free of impoundments and are generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- **“Scenic” river areas**—Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- **“Recreational” river areas**—Those rivers or sections of rivers that are readily accessible by road or railroad, which may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. Scenic qualities are a major consideration in the designation of rivers as wild (pristine), scenic (largely undeveloped), or recreational (mostly developed), although river segments in any of the three categories typically maintain high scenic qualities.

E.2.13.3 Recreation Beneficial Use

The State Water Board categorizes beneficial uses associated with water-based recreation as either contact or noncontact. *Water contact recreation* specifies uses of water for recreational activities involving bodily contact with water, where ingestion of water is reasonably possible. These uses include swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and use of natural hot springs. *Noncontact water recreation* specifies uses of water for recreational activities involving proximity to water but not normally involving bodily contact with water, where ingestion of water is reasonably unlikely. These uses include picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with these activities.

In addition, commercial and sportfishing and shellfish harvesting are designated beneficial uses that involve uses of water for commercial or recreational collection of fish, shellfish, or other organisms intended for human consumption or bait purposes. Beneficial uses of water also include uses that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters, mussels) for human consumption, commercial, or sports purposes.

The State Water Board and regional water boards include conditions in their permits that protect recreational beneficial uses.

E.2.13.4 Local Regulatory Framework

Cities and counties incorporate recreation into their comprehensive general plans to guide the community’s growth and development. Recreation may be addressed in the land use element of the general plan. Bicycle and pedestrian routes are addressed in the circulation element and may also relate to recreation. General plans identify and articulate policies related to parks, playgrounds, recreation centers, swim centers, public gardens, marinas, public paths and stairways, landscaped medians, and sidewalks. Waterways and associated recreation may be described in open space/conservation elements.

The Delta Protection Element of the Sacramento County General Plan includes policies to assess the need for new recreation access and facilities and the development and maintenance of recreational

facilities in Sacramento County (Policy DP-37). New opportunities for recreation in different regions of the county, such as the Delta, are also mentioned in the general plan and include trails for hiking and biking and water activities (Policy DP-38). The general plan also supports multiple uses of the Delta agricultural lands to provide opportunities for hunting and wildlife habitat (Policy DP-40). (County of Sacramento 2011, Delta Protection Element)

The San Joaquin County General Plan includes a policy protecting the diverse resources upon which recreation is based, including waterways, marsh lands, wildlife habitats, unique land and scenic features, and historic and cultural sites, both in the county generally and specifically in the Delta (Policies NCR-8.7 and D-3.4). The general plan also emphasizes that the county will continue to be prominent in developing regional parks and developing these parks to be 100 acres minimum (Policy NCR-8.8). (^San Joaquin County 2016)

E.2.14 Transportation and Traffic

E.2.14.1 Title 23 United States Code Section 109

Title 23 of the United States Code provides that design standards for National Highway System (NHS) projects must be approved by the Secretary of USDOT in cooperation with the state highway departments. State highway departments, working through the AASHTO, develop design standards in coordination with FHWA. AASHTO serves as a liaison between state departments of transportation and the federal government. The Caltrans *Highway Design Manual* establishes uniform policies and procedures to implement the state highway design functions of Caltrans (Caltrans 2019).

Section 1404(a) of the Fixing America's Surface Transportation Act amended 23 United States Code section 109 to require the consideration of certain factors during the design of projects on the NHS and expands the list of publications to be considered by the Secretary of Transportation when developing design criteria for projects on the NHS. Section 1404(a) of the Fixing America's Surface Transportation Act requires the Secretary of Transportation to consider the *Urban Street Design Guide* by the National Association of City Transportation Officials and the *Highway Safety Manual* by AASHTO in addition to other design considerations previously contained in 23 United States Code section 109(c)(2). The FHWA allows for design flexibility and full consideration of community context in transportation projects, including consideration of the *Urban Street Design Guide* in combination with other resources for projects on urban streets. (FHWA 2016)

Federal and state highways in California are maintained by Caltrans and include high-volume, multilane divided freeways in the interstate highway system. Building and maintaining roads and bridges are generally the responsibility of state and local governments and are regulated accordingly through a multistage permitting process. For example, design criteria must be met, grading permits are generally required, and encroachment permits may be necessary for building new roads. Caltrans' Division of Design provides policies, procedures, guidance, technical assistance, training, and equipment needed to develop and maintain a safe, sustainable, integrated, and efficient transportation system. Best practices and design information promotes safety, statewide consistency, efficiency, and quality.

E.2.14.2 United States Coast Guard

Titles 14 and 33 of the United States Code and other portions of the Code of Federal Regulations give the U.S. Coast Guard authority for maritime law enforcement on the 19 navigable waters of the United States, as well as responsibilities for search and rescue, among 20 other roles. Title 33 United States Code section 162 provides regulations for navigation by both commercial and noncommercial vessels in Suisun Bay and on the San Joaquin River, Sacramento River, and connecting waters (33 U.S.C. § 162.205), among other U.S. waters.

The construction of any bridge across the navigable waters of the United States is prohibited unless first authorized by the U.S. Coast Guard. A bridge permit from the U.S. Coast Guard is required to construct or modify a bridge or causeway across a U.S. navigable waterway (including temporary bridges used for construction access or traffic detour). (U.S. Coast Guard 2016)

E.2.14.3 Rivers and Harbors Act

The Rivers and Harbors Act prohibits the construction of any bridge, dam, dike, or causeway over or in navigable waterways of the United States without congressional approval. The U.S. Coast Guard manages oversight of these structures and protects people, maritime commerce, and the environment against hazards in navigable waters of the United States.

E.2.14.4 Public Resources Code

In accordance with CEQA Public Resources Code section 21092.4, the lead agency for a project that would have statewide, regional, or area-wide significance is required to consult with the regional transportation planning agency and public agencies that have transportation facilities that could be affected. Statewide, regional, or area-wide significance is defined in State CEQA Guidelines section 15206.

E.2.14.5 Transportation Plans

The Caltrans Office of State Planning facilitates the development and preparation of the long-range California Transportation Plan, which is required by federal and state law. The most recent transportation plan, *California Transportation Plan 2050*, provides a common framework for guiding transportation decisions and investments by government and the private sector (Caltrans 2021). A state transportation plan is required by federal and state law and acts as the policy framework for transportation in California.

A transportation management plan encompasses activities to be implemented to minimize traffic delays that may result from lane closures or restrictions in a work zone to improve mobility as well as traffic and highway worker safety. Transportation management plan strategies are required for all planned construction, maintenance, and encroachment permit activities and generally fall into the following six categories: public information, motorist information, incident management, construction strategies, demand management, and alternate routes. These strategies can include weekday and weekend lane closures or modifications, construction staging, traffic handling plans during construction, and pedestrian/bicycle access improvements (^Caltrans 2015).

E.2.14.6 Surface Transportation Assistance Act Truck Routes

The Surface Transportation Assistance Act (STAA) authorized the establishment of a national network of highways designated for use by large trucks (STAA-designated trucks). STAA-designated trucks are restricted to interstate and certain primary routes, collectively known as the national network. Operating STAA-designated trucks on roads other than the designated routes can compromise traffic safety, as these trucks have a larger turning radius than most local roads can accommodate. Caltrans has jurisdiction over designated truck routes.

E.2.14.7 Zone Safety and Mobility Rule

Title 23 Code of Federal Regulations part 630, subpart J, *Federal Work Zone Safety and Mobility Regulations*, requires Caltrans to adopt a policy for the systematic consideration and management of work zone impacts on all federally funded highway projects. Deputy Directive-60 Transportation Management Plans (DD-60), which officially established the transportation management plan program in 2000, outlines strategies necessary to minimize traffic congestion during road work activities on the state highway system.

E.2.14.8 Local Regulatory Framework

Cities and counties maintain local roadways. Roadway facilities are designed to accommodate the flow of everyday vehicle operations and to allow emergency evacuations necessitated by natural or human-caused events. These emergency events include medical and fire emergencies, traffic incidents, earthquakes, and flooding. Each county has an emergency response plan, and some of the counties have designated evacuation routes that allow for emergency evacuations necessitated by natural or human-caused events, including accidents caused by construction activities.

Transportation plans include Caltrans' plans for state highways, regional transportation plans, and city and county general plan circulation elements, all of which include goals, policies, and performance standards for the covered transportation network. Transportation plans typically identify service goals for streets, highways, and intersections; pedestrian and bicycle access; and public transit services. The plans also may include standards to guide roadway surface maintenance.

State-mandated congestion management programs (Gov. Code, § 65089) identify goals and objectives to reduce congestion on highways and roads in the state. Regional transportation agencies work with councils of government and planning agencies to implement the congestion management program planning measures, infrastructure improvements, land use regulation, and monitoring and enforcement actions to improve conditions on specified roadways.

The circulation element of local general plans includes policies governing transportation and traffic. The Sacramento County General Plan Circulation Element states that development projects shall be responsible to mitigate the project's adverse impacts on local and regional roadways. Sacramento County is also aiming to reduce per capita vehicle miles traveled (VMT), as stated in Policy CI-5. To promote the maintenance of rail transportation, the County will fund construction for rail crossings to reduce congestion and improve safety (Policy CI-44). As indicated in Policy CI-72, Sacramento County will maintain operations on urban roadways at LOS E or better and reduce VMT. (County of Sacramento 2011, Circulation Element.)

The San Joaquin County General Plan includes policies to maintain certain levels of service on roadways and to manage the temporary diversion of traffic so as not to overburden rural roadways

(Policies TM-3.1 and TM-3.11) and to reduce VMT in its transportation system (Policy TM-1.7). Policy TM-1.10 of the San Joaquin County General Plan provides for the elimination of gaps in the transportation network by constructing new bikeways and pedestrian ways. (^San Joaquin County 2016)

E.2.15 Utilities and Service Systems

E.2.15.1 The California Integrated Waste Management Act

The California Integrated Waste Management Act (AB 939 [Sher], Statutes of 1989, as amended) made all California cities, counties, and regional solid waste management agencies responsible for planning and implementing diversion of solid waste from solid waste disposal facilities to meet the mandatory goal of 25 percent waste diversion by 1995 and 50 percent by 2000. (Pub. Resources Code, §§ 40000 et. seq.) The California Department of Resources Recycling and Recovery (CalRecycle) provides regulatory oversight of solid waste management facilities. CalRecycle oversees and assists local governments to develop and implement the mandates and subsequent legislation. Enforcement is primarily carried out by local enforcement agencies, with CalRecycle acting as the state enforcement agency.

According to CalRecycle's 2014 Disposal Facility-Based Characterization of Solid Waste in California, construction and demolition materials are estimated to account for between 21.7 and 25.5 percent of California's waste disposal (CalRecycle 2021). Waste generated in construction or demolition activities also includes large quantities of material found in the general waste stream. For example, the construction and demolition waste stream also include corrugated cardboard from packaging, a variety of plastics (e.g., polyvinyl chloride pipe, packaging), glass, and yard wastes from site work and clearing. Existing municipal recycling programs may be suitable for recovering these common materials. Some of the other materials may need special handling, either as solid or as hazardous waste (see Section E.2.8, *Hazards and Hazardous Materials*).

Effective January 1, 2011, California's Green Building Standards Code requires the diversion of at least 50 percent of the construction waste generated during most "new construction" projects (Cal. Code Regs., tit. 24, §§ 4.408, 5.408). Subsequent amendments have expanded upon what types of construction are covered. A city or county may enact local ordinances with more restrictive green building standards because of local conditions. California's Green Building Standards Code requires submission of plans and reports with verifiable post-project documentation to demonstrate that nonhazardous construction and demolition debris generated on the job site are salvaged for reuse, recycled, or otherwise diverted.

E.2.15.2 Water Supply Assessment

SB 610 (Costa), Statutes of 2001, became effective on January 1, 2002, amending the Water Code by requiring detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the linkage between water and land use planning by ensuring greater communication between water providers and local planning agencies and ensuring that land use decisions for certain large development projects are fully informed as to whether sufficient water supplies are available to meet project demands. SB 610 requires the preparation of a water supply assessment for any project that is subject to CEQA and meets certain requirements. A water supply assessment that is associated with a project must include a discussion of the availability of an identified water supply under normal year, single dry year, and multiple dry year

conditions over a 20-year projection, accounting for the projected water demand of the project in addition to other existing and planned future uses of the identified water supply.

A project that is subject to CEQA requires preparation of a water supply assessment if it is a proposed industrial facility occupying more than 40 acres of land (Wat. Code, § 10912, subd. (a)).

E.2.15.3 Land Disposal Program

The State Water Board's Land Disposal Program implements statewide regulations for sites and facilities where waste is discharged to land. Waste discharges to land in the Land Disposal Program are regulated as waste management units. Waste management units may include waste piles, land treatment units, surface impoundments, and landfills. Regulatory activities include permitting, closure, technical report reviews, inspections, enforcement, and program management. Facilities must be sited, designed, constructed, operated, closed, and maintained according to the regulations. In addition, monitoring is required, especially groundwater monitoring, to detect a release of waste constituents as soon as possible. If waste is released to groundwater, it must be reported and cleaned up. Corrective action is required when a release occurs. Financial assurances are required for closure, post-closure, and corrective action. As described in Section E.2.9, *Hydrology and Water Quality*, the state Porter-Cologne Water Quality Control Act and the federal RCRA provide the State Water Board and regional water boards authority to regulate waste discharges. The Land Disposal Program is a USEPA-approved program for implementing the RCRA subtitle D regulations (see Section E.2.8.1, *Toxic Substances Control Act and Resource Conservation and Recovery Act*).

California Code of Regulations title 27 contains the regulatory requirements for nonhazardous wastes. California Code of Regulations title 23, chapter 15 establishes waste and site classifications, and waste management requirements for waste treatment, storage, or disposal in landfills, surface impoundments, waste piles, and land treatment facilities and contains the regulatory requirements for hazardous wastes. The regulations prescribe protective measures and require performance standards to be met in waste containment.

E.2.15.4 Local Regulatory Framework

Local general plans provide guidance on utilities and service systems, including water, wastewater collection and treatment, and solid waste services. For example, Policy PF-20 in the Public Facilities Element of the Sacramento County General Plan supports the implementation of recycling programs through the Source Reduction and Recycling Element of the County Integrated Waste Management Plan in order to meet the requirements of AB 939 (County of Sacramento 2011, Public Facilities Element). In order to ensure adequate infrastructure, the San Joaquin County General Plan requires new developments that include improvements to existing infrastructure or new infrastructure to meet the requirements and standards of the County or service provider (Policy IS-1.2) (^San Joaquin County 2016).

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