

## 3.19 Utilities and Service Systems and Public Services

### 3.19.1 Introduction

This section describes utilities and service systems and public services in the study area and the potential impacts of the types of restoration projects that would be permitted under the Order. (See Section 2.6, *Categories of Restoration Projects in the Order*.)

Utilities and service systems that could be affected by these restoration projects include water supply treatment and distribution systems, wastewater collection and treatment systems, and solid waste collection and disposal. Many of these services and utilities are provided by counties, cities, or community services/special districts; in some cases, local governments may contract the services to private entities. Public services that may be affected by restoration projects permitted under the Order include police, emergency response, and fire protection, parks, and other public facilities. Impacts related to changes in water supply and runoff from drainage system capacity and water quality are addressed in Section 3.11, *Hydrology and Water Quality*. Impacts related to public services and emergency response are addressed in Section 3.10, *Hazards and Hazardous Materials*, Section 3.17, *Transportation*, and Section 3.20, *Wildfire*.

The environmental setting and evaluation of impacts on utilities and service systems and public services is based on a review of existing published documents, including city and county general plans; information regarding example projects similar to those permitted under the Order that may be implemented by other agencies; and other information sources listed in Chapter 8, *References*.

No comments specifically addressing utilities and service systems and public services were received in response to the notice of preparation (NOP). See Appendix B for NOP comment letters.

### 3.19.2 Environmental Setting

This section describes the utilities and service systems and public services that could be affected by the types of restoration projects that would be permitted under the Order. The area of analysis covers the entire geographic extent of California and includes numerous utilities and service systems and public services.

Water supply and distribution systems, wastewater collection and treatment systems, solid waste collection and disposal, and public services (law enforcement, emergency medical services, and other public facilities) are described here to support a program-level analysis of environmental impacts.

#### ***Utilities and Service Systems***

##### **Water Supply and Distribution Systems**

In California, water service is provided by cities, counties, special districts, and private utilities. Most service providers get their water from surface water, groundwater, or a

combination of both, and serve a wide range of connections, from just a few connections to thousands. Water rights, water contract agreements, groundwater pumping limitations, and the infrastructure required to treat, pump, and deliver water are the factors that limit the amount of water available to service providers.

### **Wastewater Collection and Treatment Systems**

A variety of federal and state laws regulate wastewater in California; however, wastewater collection and treatment services are provided by cities, counties, and special districts. Urban areas generally contain collection systems at wastewater facilities. Where sewer service is unavailable, residents and businesses in some rural areas dispose of wastewater in on-site septic systems. In some areas, individual nonindustrial developments also have treatment plants to treat localized wastewater from mobile home parks, apartment complexes, and resorts.

Municipal sewer systems consist of sewer collection pipelines, treatment facilities, and outfall structures or disposal systems. Secondary- or tertiary-treated effluent is generally discharged into rivers, streams, creeks, and sloughs. Land disposal includes evaporation and percolation plants, or application to irrigated agricultural lands. During the summer, recycled effluent is used for industrial purposes or agricultural irrigation. In addition, municipalities may provide wastewater collection infrastructure and services that discharge to regional facilities owned and operated by other municipalities.

### **Solid Waste Collection and Disposal**

Counties and cities oversee solid waste management planning, administration, and facility approval. Under the California Integrated Waste Management Act, local enforcement agencies are responsible for permitting of solid waste facilities. Where authorized local enforcement agencies are missing, permitting falls under the jurisdiction of the California Department of Resources Recycling and Recovery (CalRecycle).

Many municipalities enter into franchise agreements with private waste management businesses. Planning and operation of solid waste management facilities is typically coordinated regionally; some communities do not have landfill sites within their boundaries, thus making it necessary for such communities to haul waste to a facility outside the county or city for disposal. These communities use transfer stations and recycling facilities that are a component of local waste management solutions.

To comply with state diversion regulations, extend the life of landfills, reduce the environmental impacts of solid waste disposal, and reuse resources, resource recovery measures such as recycling, composting, and waste-to-energy are implemented. These activities are often subject to performance measures and requirements identified in local integrated waste management plans.

### **Telecommunication**

The California Public Utilities Commission develops and implements policies for the telecommunication industry to achieve the following goals:

- ◆ Ensure fair, affordable universal access to necessary services.
- ◆ Develop clear rules of the game and regulatory tools to allow flexibility without compromising due process.
- ◆ Remove barriers that prevent a fully competitive market.
- ◆ Reduce or eliminate burdensome regulation.

In California, telecommunication facilities are being shifted to wireless facilities such as small cells and distributed antenna systems. A majority of these facilities are proposed for installation in public rights-of-way. U.S. Code Title 47, Section 332 (47 USC 332) maintains local authority over local decisions regarding the placement, construction, and modification of personal wireless telecommunication facilities.

### **Natural Gas**

Natural gas consists of many different compounds such as methane and natural gas liquids (ethane, propane, butanes, and pentanes). It is formed through the decomposition of historic animals and plants that have been converted to hydrocarbon fuels by high pressure and temperatures deep under the earth's surface.

In 2018 California withdrew approximately 202,616 million cubic feet from gas, oil, and shale gas wells within its boundaries. Out of the 30.59 trillion cubic feet of natural gas used in the United States in 2018, California was the second largest consumer, using approximately 7.1 percent of natural gas used in the U.S. (EIA 2019). Nearly 90 percent of California's natural gas supply comes from out-of-state imports; approximately 45 percent of the natural gas burned in California is used for electricity generation, 21 percent is consumed in the residential sector, 25 percent in the industrial sector, and 9 percent in the commercial sector.

Natural gas facilities in the state provide residents with electricity, heat buildings, fuel vehicles, and provide many other uses. Natural gas is generally delivered to residents and users through pipelines and tanks in the form of compressed natural gas. These facilities are located throughout the state.

### **Electric Power**

In 2018, California produced approximately 194,842 gigawatt-hours of electricity and imported approximately 90,646 gigawatt-hours (CEC 2019). Generally, electric power is generated by power plants or renewable energy resources such as hydropower, geothermal, biomass, and solar energy. Energy is transferred through electricity substations, transformers, and power lines that relay the energy from the producer to the consumer.

California is part of the western transmission system that helps keep electricity flowing reliably and safely throughout the western United States. On a more local scale, balancing authorities help to ensure that demand and supply are regionally balanced. California has eight balancing authorities:

- ◆ Balancing Authority of Northern California
- ◆ California Independent System Operator

- ◆ Imperial Irrigation District
- ◆ Los Angeles Department of Water & Power
- ◆ PacifiCorp West
- ◆ NV Energy
- ◆ Turlock Irrigation District
- ◆ Western Area Lower Colorado

The California Independent System Operator operates in all 58 California counties and operates the flow of electricity through three main investor-owned utilities (Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas and Electric Company) in addition to several other municipal operators.

### **Public Services**

Public services are provided by counties, cities, or community services/special districts, and in some cases by private entities under contract with local governments. The level of demand for public services depends on the population requiring such services. Additional factors that affect demand and the cost of delivering services include development density and the economic circumstances of the region.

### **Law Enforcement**

Unincorporated areas of the state are generally served by county sheriff's departments, which typically operate county jails and coroner's offices, and by the Governor's Office of Emergency Services. Incorporated cities have their own police departments that provide law enforcement within the city limits, generally including responses to calls, investigations, surveillance, and routine patrols. The California Highway Patrol, the primary law enforcement agency for state highways and roads, provides law enforcement, traffic school, accident investigations, and management of hazardous materials spills. The California Department of Fish and Wildlife is responsible for enforcing laws governing hunting and fishing.

### **Fire Protection and Emergency Medical Services**

#### *Fire Protection*

Emergency medical rescue and fire protection services are provided by cities, counties, and special districts. Some agencies provide advanced life support via fire department ambulances, paramedic squads, and/or the placement of firefighters/paramedics on fire engines. Special squads or response units operated by fire districts, fire departments, and county sheriff's offices conduct water rescues. Fire districts receive and respond to an abundance of calls, most for medical emergencies, with fire suppression making up the remaining calls. Multiple fire districts and departments serve counties, cities, and communities in California. These districts and departments are located strategically to fulfill targeted response times. These response goals are affected by geographic distance (shorter in urban locations, longer in rural areas), circulation, development, and population growth.

#### *Emergency Medical Services*

Emergency medical services in California include emergency dispatch (911), ambulances, and hospitals and other medical care services.

### *Ambulances*

Ambulance services are provided by local fire districts or contracted through private companies. To provide advanced life support and ambulance transport services in a region, private ambulance companies must obtain operating permits. In some cases, fire departments are equipped to provide advanced life support until an ambulance service arrives, but they mostly provide first responder services such as basic life support.

### *Hospitals and Medical Care Services*

Numerous hospitals and medical care services are located within the study area with services ranging from emergency services to social services, radiation therapy, comprehensive outpatient rehabilitation services, home health care services, and many others.

### **Other Public Facilities**

Numerous public school districts operate in the study area, serving students from preschool through high school. These districts are typically found in more densely populated areas. Libraries are provided by counties affected by population growth and demographic changes. Public libraries are typically funded by local property taxes, state funds, library fines and fees, grants, and donations. County libraries generally provide additional community services such as internet access, mobile book services, children's programs, and adult literacy programs in addition to traditional services. Each county in the study area generally provides public library services to its residents in coordination with the cities.

According to 42 USC 5122, a "public facility" is defined as a facility owned by the state or local government such as:

- ◆ A flood control, navigation, irrigation, reclamation, public power, sewage treatment and collection, water supply and distribution, watershed development, or airport facility
- ◆ A non-federal-aid street, road, or highway
- ◆ Any other public building, structure, or system, including those used for educational, recreational, or cultural purposes
- ◆ Any park

The Order would include the use of such public facilities such as access and haul routes consisting of public roads, nature preserves, and other public facilities found throughout the state.

## **3.19.3 Regulatory Setting**

This section discusses federal, state, and regional and local plans, policies, regulations, and laws, and ordinances pertaining to utilities and public services.

Future permitted restoration projects that would be implemented under the Order may be subject to the laws and regulations listed below, as well as other local or individual restoration projects requirements, depending on the project location.

## ***Federal***

### **Clean Water Act**

The Federal Water Pollution Control Act Amendments of 1972, also known as the Clean Water Act (CWA), established the institutional structure for the U.S. Environmental Protection Agency (EPA) 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. Congress has amended the CWA several times since 1972.

EPA has provided most states with the authority to administer many of the provisions of the CWA. In California, the State Water Board has been designated by EPA 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 Boards.

Water quality criteria are designed to protect beneficial uses. Ambient surface water quality may be judged against national and state water quality criteria and specific numeric and narrative objectives of the water quality control plan (basin plan). Each Regional Board has established its own basin plan, which contains regulations meant to control the discharge of waste and other controllable factors that affect the quality of waters of the state within each region's boundaries.

Section 303(d) requires states, territories, and authorized tribes to develop a list of water quality-impaired segments of waterways and other water bodies under their jurisdiction. The law requires that the jurisdictions establish priority rankings of waters on the list and develop action plans, or total maximum daily loads, to improve water quality.

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point-source discharges of pollutants into waters of the United States. (EPA defines a "point source" as "any single identifiable source of pollution from which pollutants are discharged, such as a pipe, ditch, ship or factory smokestack.") An NPDES permit sets specific discharge limits for point sources that discharge pollutants into waters of the United States and establishes monitoring and reporting requirements, as well as special conditions. Typically, Regional Boards issue NPDES permits for a 5-year period.

### **Safe Drinking Water Act**

The Safe Drinking Water Act, which was enacted to protect the quality of drinking water in the United States, authorizes EPA to:

- ◆ Establish minimum standards to protect tap water
- ◆ Require all owners and operators of public water systems to comply with health-related standards

- ◆ Establish minimum standards for state programs to protect underground sources of drinking water

Under the Safe Drinking Water Act, state governments can be authorized to implement rules established by EPA.

### **Resource Conservation and Recovery Act**

Subtitle D of the Resource Conservation and Recovery Act (42 USC 6901 et seq.) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills. EPA's waste management regulations are listed in Volume 40, Parts 239–282 of the Code of Federal Regulations. Resource Conservation and Recovery Act Subtitle D is implemented by Title 27 of the Public Resources Code, approved by EPA.

## **State**

### **Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) established the State Water Board and the Regional Boards as the principal state agencies with primary responsibility for the coordination and control of water quality (Water Code Section 13001), including the enforcement of applicable laws and regulations. In addition to overseeing the efforts of the Regional Boards, the State Water Board is responsible for allocating surface water rights.

The State Water Board and Regional Boards focus their efforts primarily on stormwater; wastewater treatment; water quality monitoring; wetlands protection; ocean protection; environmental education; environmental justice; cleanup of contaminated sites, including brownfields; and low-impact development. They also administer several financial assistance programs to assist communities in the construction of water and wastewater infrastructure (State Water Board 2019).

Under the Porter-Cologne Act, waters of the state fall under the jurisdiction of the State Water Board and the nine Regional Boards. "Waters of the state" are any surface or groundwater body within the boundaries of the state (Water Code Section 13050[e]). The State Water Board and Regional Boards have been delegated federal authority to implement the requirements of the federal CWA in California, including issuing federal NPDES permits, pursuant to the Porter-Cologne Act. However, the requirements of the Porter-Cologne Act are even broader than those of the CWA.

Under the Porter-Cologne Act, the Regional Boards must prepare and periodically update water quality control plans, also known as basin plans. Each basin plan sets forth water quality objectives sufficient to ensure the reasonable protection of designated beneficial uses of surface water and groundwater, and actions to control nonpoint and point sources of pollution. 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 Board. "Waste" includes any and all waste substances associated with human habitation, of human or animal origin, or from any producing, manufacturing, or processing operation (Water Code Section

13050[d]). Upon receipt of a report of waste discharge, the Regional Board may issue “waste discharge requirements” designed to ensure compliance with applicable water quality objectives and other requirements of the basin plan.

### **California Public Utilities Commission**

The California Public Utilities Commission regulates privately owned water, energy, and telecommunications utilities. The commission is also responsible for safety enforcement, which includes investigating accidents occurring on the property of any public utility. The California Public Utilities Commission’s Division of Ratepayer Advocates has a statutory mandate to obtain the lowest possible utility rates for service consistent with safe and reliable service levels.

### **State Water Board’s Division of Drinking Water**

The State Water Board’s Division of Drinking Water (DDW) is responsible for regulating public water systems; oversees water recycling projects; permits water treatment devices; supports and promotes water system security; and performs a number of other functions. The DDW consists of three branches: The Northern California Field Operations Branch, the Southern California Field Operations Branch, and the Program Management Branch. The Northern California and Southern California Field Operations Branches (FOBs) are responsible for the enforcement of the federal and California Safe Drinking Water Acts and regulatory oversight of public water systems within California. In this undertaking, staff perform field inspections, issue operating permits, review plans and specifications for new facilities, take enforcement actions for non-compliance with laws and regulations, review water quality monitoring results, and support and promote water system security. The FOBs also participate in funding infrastructure improvements, conducting source water assessments, overseeing water recycling projects, and promoting public water systems in drought preparation and water conservation.

### **Integrated Waste Management Act (Assembly Bill 939)**

The regulations affecting solid waste disposal in California can be found in Title 14 of the California Public Resources Code, the Integrated Waste Management Act. Originally enacted in 1989 through Assembly Bill (AB) 939, the law is designed to increase the life of landfills by requiring diversion of solid waste from landfills in the state and conservation of other resources through increased recycling programs and incentives.

AB 939 requires counties to prepare integrated waste management plans to implement landfill diversion goals, and requires cities and counties to prepare and adopt source reduction and recycling elements. These elements must establish a program for managing solid waste generated within the city’s or county’s jurisdiction. Each source reduction and recycling element must include, but is not limited to, all of the following components for solid waste generated within the plan’s jurisdictional area:

- ◆ Waste characterization
- ◆ Source reduction
- ◆ Recycling
- ◆ Composting
- ◆ Solid waste facility capacity

- ◆ Education and public information
- ◆ Funding
- ◆ Special waste

Source Reduction and Recycling Element programs are designed to achieve landfill diversion goals by encouraging recycling in the manufacture, purchase, and use of recycled products. AB 939 also requires California cities to implement plans designed to divert the total solid waste generated within each jurisdiction by 50 percent based on a base year of 2000. The diversion rate is adjusted annually for population and economic growth when calculating the percentage achieved in a particular jurisdiction.

#### **Public Resources Code Section 41780**

The California Legislature set a policy goal that not less than 75 percent of solid waste generated in the state would be source reduced, recycled, or composted commencing by January 1, 2020. A 50 percent diversion rate will be enforced for local jurisdictions.

#### **Assembly Bill 1220**

CalRecycle and the State Water Board completed parallel rulemaking as a result of AB 1220 (Chapter 656, Statutes of 1993). AB 1220 required clarification of the roles and responsibilities of CalRecycle and the State Water Board, the Regional Boards, and CalRecycle's local enforcement agencies in regulating solid waste disposal sites. The approved regulations in California Code of Regulations (CCR) Title 27 combine the prior disposal site/landfill regulations of CalRecycle and the State Water Board, which were maintained in CCR Title 14 and CCR Title 23, Chapter 15 (which contains requirements for disposal of hazardous waste).

The purpose of CalRecycle's regulatory standards is to protect public health and safety and the environment. The regulations apply to active and inactive disposal sites, including facilities or equipment used there. These standards clarify that the local enforcement agency has primary responsibility for enforcing the state's minimum standards, working in cooperation with the Regional Board or other oversight agencies.

The CCR Title 27 regulations also include the following operating criteria and requirements for landfills and disposal sites:

- ◆ Sufficient materials to cover waste to prevent a threat to human health and the environment
- ◆ Proper handling of waste and the equipment needs of solid waste facilities
- ◆ Control of activities on-site
- ◆ Control of landfill gas that is made from the decomposition of wastes on-site
- ◆ Proper operation of the site to protect the site from fire threats

#### **Assembly Bill 341**

To reduce greenhouse gas emissions from disposal of recyclables in landfills, AB 341 requires local jurisdictions to implement commercial solid waste recycling programs. Businesses that generate 4 cubic yards or more of solid waste per week or multifamily dwellings of five units or more must arrange for recycling services. To comply with AB 341, jurisdictions' commercial recycling programs must include education, outreach, and monitoring of commercial waste generators and must report on the process to

CalRecycle. Jurisdictions may enact mandatory commercial recycling ordinances to outline how the goals of AB 341 will be reached.

For businesses to comply with AB 341, they must arrange for collection of recyclables by self-hauling, subscribing to a franchised hauler for collection, or subscribing to a recycling service that may include mixed waste processing that yields diversion results comparable to source separation (CalRecycle 2019).

### **Assembly Bill 1826**

To further reduce greenhouse gas emissions from disposal of organic materials in landfills, AB 1826 required certain businesses to recycle their organic waste beginning on April 1, 2016, with required recycling services dependent on the amount of solid waste generated per week. Similar to AB 341, jurisdictions must implement an organic waste recycling program that includes the education, outreach, and monitoring of businesses that must comply. “Organic waste” refers to food waste, green waste, landscaping and pruning waste, nonhazardous wood waste, and food-soiled paper that is mixed with food waste.

### **California Occupational Safety and Health Administration**

In accordance with 8 CCR Section 1270, *Fire Prevention*, and 8 CCR Section 6773, *Fire Protection and Fire Equipment*, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. Among the standards are guidelines on the handling of highly combustible materials; requirements for the sizing of fire hoses; restrictions on the use of compressed air; access roads; and testing, maintenance, and use of all firefighting and emergency medical equipment.

### **Uniform Fire Code**

The Uniform Fire Code provides regulations governing the construction, maintenance, and use of buildings. The code addresses fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, storage and use of hazardous materials, provisions for protecting and assisting fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Uniform Fire Code contains specialized technical regulations related to fire and life safety. The code provides sprinkler system standards and requirements for different types of buildings, including hospitals.

### **Essential Services Building Seismic Safety Act**

The Essential Services Building Seismic Safety Act of 1986 (California Health and Safety Code, Sections 16000–16022) applies to fire stations, police stations, and other public facilities that respond to emergencies. This law is intended to ensure that essential-services buildings can continue to serve the public after a disaster, and are designed and constructed to minimize fire hazards. In addition, these buildings and the nonstructural components vital to their operation must be able to resist, insofar as practical, the forces created by earthquakes, gravity, fire, and wind.

### **California Health and Safety Code**

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code. The code includes regulations for building standards (as established in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, and fire suppression training.

### ***Regional and Local***

Policies and regulations governing utilities and public services are found in each county's adopted general plan and can vary from county to county.

## **3.19.4 Impacts and Mitigation Measures**

### ***Methods of Analysis***

Utilities and public services impacts from the types of restoration projects permitted under the Order are evaluated in terms of how typical construction and operation of project components could impact existing utilities and service systems and public services. However, the precise locations and characteristics of potential future individual restoration projects are yet to be determined. Therefore, this utilities and public services analysis focuses on reasonably foreseeable changes from implementation of the types of projects and actions that might be taken in the future consistent with the level of detail appropriate for a program-level analysis.

Permanent impacts are considered those that would continue through the life of a project as a result of the environmental conditions caused by restoration projects permitted under the Order (e.g., new infrastructure that would require maintenance and monitor activities). Temporary impacts are those that would be temporary in nature (e.g., construction-related activities).

The approach to assessing utilities and public service impacts was to identify and review existing environmental studies, data, model results, and other information for projects that are consistent with those identified in Section 2.6, *Categories of Restoration Projects in the Order*, and Section 2.7, *Typical Construction, Operation, and Maintenance Activities and Methods*.

### ***Thresholds of Significance***

In accordance with Appendix G of the State CEQA Guidelines, an impact related to utilities and public services is considered significant if the types of restoration projects that would be permitted under the Order would do any of the following:

- ◆ Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects
- ◆ Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years

- ◆ Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments
- ◆ Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of soil waste reduction goals
- ◆ Fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste
- ◆ Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
  - Fire protection
  - Police protection
  - Schools
  - Park
  - Other public facilities

Section 3.11, *Hydrology and Water Quality*, evaluates impacts related to changes in water supply availability for water users in California, as well as impacts of increased surface runoff on drainage system capacity and water quality. For a more detailed discussion of public services related to fire protection and wildfire, see Section 3.20, *Wildfire*.

### ***Impacts Not Evaluated Further***

Construction of new wastewater systems (e.g., collection, treatment, and discharge facilities) or expansion of existing systems is prompted by increased customer demand, typically as a result of new land development (such as development that transitions land use from a rural to more urban use) or population growth. Future restoration projects permitted under the Order would not include development of occupied structures that would result in an increase in demand for wastewater treatment. Construction crews are generally available in existing population centers and would not be anticipated to relocate when assigned to a new construction site (discussed further in Section 3.15, *Population and Housing*). Therefore, construction activities would not add substantial new customer demands to existing wastewater systems.

To the extent that future restoration projects permitted under the Order would occur in municipal settings, the relatively small amount of wastewater temporarily generated by construction activities would not exceed any requirements or require the construction of new or expansion of existing wastewater treatment facilities. Therefore, no adverse impact would occur, and issues related to new or expanded wastewater treatment facilities are not discussed further in this PEIR.

**Impacts and Mitigation Measures**

Table 3.19-1 summarizes the impact conclusions presented in this section for easy reference.

As part of the State Water Board or Regional Board’s issuance of a NOA for a restoration project under the Order, compliance with the general protection measures and mitigation measures listed below would be required when applicable to a given project. Not all general protection measures and mitigation measures would apply to all restoration projects. The applicability of the general protection measures and mitigation measures would depend on the individual restoration activities, project location, and the potentially significant impacts of the individual restoration project. Implementation of the mitigation measures would be the responsibility of the project proponent(s) under the jurisdiction of the State Water Board, appropriate Regional Board, or other authorizing regulatory agency.

**Table 3.19-1  
Summary of Impact Conclusions—Utilities and Service Systems and Public Services**

Impact Statement	Construction Activities	Constructed Facilities and Operations and Maintenance
<b>3.19-1:</b> Implementing future restoration projects permitted under the Order could require or result in the construction or relocation of new water or expanded water, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	SU	LTS
<b>3.19-2:</b> Implementing future restoration projects permitted under the Order could result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	LTS	LTS
<b>3.19-3:</b> Future restoration projects permitted under the Order could be served by a landfill with insufficient permitted capacity to accommodate the project’s solid waste disposal needs and could fail to comply with federal, state, and local statutes and regulations related to solid waste.	LTS	LTS
<b>3.19-4:</b> Implementing future restoration projects permitted under the Order could result in substantial adverse physical impacts associated with construction of new or modified fire protection, police protection, schools, and other public facilities.	LTS	LTS

Source: Data compiled by Environmental Science Associates in 2019 and 2020  
 Note: LTS = less than significant

**Impact 5.18-1: Implementing future restoration projects permitted under the Order could require or result in the construction or relocation of new water or expanded water, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.**

Construction of new water systems (e.g., diversion, treatment, and distribution facilities) or expansion of existing systems is prompted by increased customer demand, typically

as a result of new land development (such as development that transitions land use from rural to more urban use) or population growth. As described in Section 3.14, Population and Housing, and Section 5.1, Growth-Inducing Impacts, restoration projects permitted under the Order would not include new land development or induce substantial population growth that would add new water customer demands or increase long-term water demand from water systems.

Implementing future restoration projects permitted under the Order are not anticipated to require the relocation of new water or expanded water facilities due to the extensive cost of relocation and potential environmental impacts from the relocation. However, future restoration projects could require the relocation of stormwater outfalls or utilities (e.g., electric power, natural gas, or telecommunication facilities) that would cause significant environmental effects as described below.

#### **Effects of Project Construction Activities, Constructed Facilities (Natural or Artificial Infrastructure), and Operations and Maintenance of those Facilities**

Construction activities for restoration projects (e.g., floodplain widening or removal of small legacy structures) could require the relocation of facilities, such as stormwater outfalls, utilities (e.g., electric power, natural gas, or telecommunication facilities), or water conveyance facilities (e.g., canals or diversions), if those facilities are located near or in the footprint of the restoration project. Significant impacts could occur with relocation of the facilities. For example, a stormwater outfall or natural gas line could be in an area with cultural resources that would be impacted during relocation activities. Therefore, future restoration projects could result in the relocation of facilities that could cause significant environmental effects.

The types and range of potential environmental effects to other resource areas (e.g., effects to cultural or tribal cultural resources, special status species and habitat, erosion, water quality, air quality) due to the relocation of stormwater outfalls or other facilities resulting from construction activities are analyzed in the other resource sections in Chapter 3 of this Draft PEIR. As noted in the resource sections of Chapter 3, the Order includes general protection measures, species protection measures, and mitigation measures to avoid and minimize impacts on environmental resources in the study area resulting from the implementation of future restoration projects.

Since there are significant and unavoidable impacts for some of these resource areas this impact would be **significant and unavoidable**.

Routine O&M activities for restoration projects permitted under the Order would not require or result in the construction or relocation of new water or expanded water, storm drainage, electric power, natural gas, telecommunications facilities or water conveyance facilities. Thus, this impact would be **less than significant**. The Order does not include any general protection measures applicable to this impact.

**Impact 3.19-2: Implementing future restoration projects permitted under the Order could result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.**

Population changes could occur resulting in reasonably foreseeable future development (e.g., new housing or commercial development). These future development projects may require surface water during normal, dry and multiple dry years. A discussion of water supply requirements for restoration projects are discussed below. As detailed below, these projects are not anticipated to result in insufficient water supplies by meeting existing regulatory requirements (e.g., existing Biological Opinions on the Long-Term Operations of the Central Valley Project and State Water Project). Future restoration projects would need to comply with relevant federal, state, and local regulations and ordinances (including demonstrating there are sufficient water supplies, if needed), as would reasonably foreseeable future development projects. Therefore, implementing future restoration projects permitted under the Order would not result in insufficient water supplies to serve reasonably foreseeable future development during normal, dry, and multiple dry years.

In addition, as described in Section 3.15, Population and Housing, restoration projects would not include the development of housing or commercial structures and/or induce substantial population growth that would increase demand for water supply during normal, dry, and multiple dry years.

The use of water during construction activities and the potential need for water during operations and maintenance is discussed below.

**Effects of Constructed Facilities (Natural or Artificial Infrastructure) and Operations and Maintenance of those Facilities**

Construction-related impacts would be temporary and short-term, and the water needed for construction and construction workers could be provided by existing municipal and non-municipal systems (such as water wells or water trucks).

Restoration projects may require a water supply for maintenance activities. For example, irrigation water may be needed for the initial establishment of native plant revegetation. However, the water supply needed for maintenance would be limited and could be met by existing municipal and non-municipal systems.

Constructed facilities, including expansion or modification of floodplains and fish passage improvements, could have effects on water supply availability if water levels are reduced near diversion intakes. However, anticipated changes in water levels resulting from constructed facilities would need to comply with relevant federal, state, and local regulations and ordinances and would not impede operations of existing diversion facilities or substantially change water supply availability to water users. In addition, as described in Section 3.11, Hydrology and Water Quality, some of the long-term effects of restoration projects permitted under the Order on groundwater recharge are expected to be beneficial (e.g., stream, floodplain, and riparian restoration projects typically would improve groundwater recharge).

Therefore, construction and operations and maintenance activities would not result in an increase in water use or demand, nor would they result in insufficient water supplies available to serve the project during normal, dry, and/or multiple dry years. Impacts on water supplies would be **less than significant**. The Order does not include any general protection measures applicable to this impact.

**Impact 3.19-3: Future restoration projects permitted under the Order could be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and could fail to comply with federal, state, and local statutes and regulations related to solid waste.**

#### **Effects of Project Construction Activities**

Construction activities for restoration projects permitted under the Order could temporarily increase the amount of solid waste hauled to local landfills. The magnitude of the increase in solid waste generation would depend on the size, number, location, and nature of the projects, and their ability to recycle, reuse, or dispose of materials on-site.

Most projects permitted under the Order that would involve earthmoving activities would not generate large amounts of construction waste (e.g., organic materials from borrow areas and restoration construction sites, excavated material, and soil not suitable for earthen structures) that would require disposal at a landfill. Most excess organic material would be used to reclaim borrow areas and temporarily disturbed sites or would be provided to local farmers for incorporation into their land to help improve soil quality. Debris generated during project clearing and grubbing operations would be disposed of based on the type of material and local conditions.

The materials generated would be hauled off-site to landfills (e.g., building demolition waste); delivered to recycling facilities (e.g., concrete); sold (e.g., organic material to cogeneration facilities); or reused onsite or nearby (e.g. restoration project or other projects needing fill material). Thus, construction waste is unlikely to cause the permitted capacity of local landfills to be exceeded or would not be in compliance with federal, state, and local regulations related to solid waste. Impacts related to solid waste disposal needs and compliance would be **less than significant**. The Order does not include any general protection measures applicable to this impact.

#### **Effects of Constructed Facilities (Natural or Artificial Infrastructure) and Operations and Maintenance of those Facilities**

Restoration projects permitted under the Order would result in the construction of facilities (whether natural facilities or infrastructure). Depending on the nature of the project, operations and maintenance of these facilities could produce solid waste. As mentioned above, debris generated during operations and maintenance would be disposed of via methods that would vary by the type of material and local conditions. Furthermore, the magnitude of the increased generation of solid waste would depend on the size, number, location, and nature of projects. The amount of solid waste likely to be generated by these uses would be very small relative to landfill capacity. Thus, the restoration projects permitted under the Order are unlikely to cause the permitted capacity of local landfills to be exceeded, or to create conflicts with federal, state, and local regulations related to solid waste. Therefore, impacts related to solid waste

disposal needs and compliance would be **less than significant**. The Order does not include any general protection measures applicable to this impact.

**Impact 3.19-4: Implementing future restoration projects permitted under the Order could result in substantial adverse physical impacts associated with construction of new or modified fire protection, police protection, schools, and other public facilities.**

The need for new or altered police and fire protection services, emergency medical facilities, and school and library facilities is prompted by increased demand, typically as a result of new land development or population growth. Construction activities for future restoration projects permitted under the Order would not include new land development or occupied structures that would increase population and add new public service demands. However, potential impacts on public services during construction, operations, and maintenance activities for the restoration projects that would be permitted under the Order are discussed below.

**Effects of Project Construction Activities**

Construction activities for future restoration projects permitted under the Order would not include the construction of new or modified fire or police protection facilities, schools, or other public facilities and would not increase population or add new public service demands. Construction activities could result in a temporary increase in the need for construction crews. However, any increase in the regional population resulting from project construction would be negligible because the number of workers needed for any given project would be a tiny fraction of the overall population of urban and suburban areas, and thus a less than measurable increase in demand for housing. In rural areas, the increase in residents may create a local demand for housing; however, such areas typically do not have the housing shortages associated with urban areas, and the demand would typically be temporary. Housing shortages in areas that have recently been subject to natural disasters, such as wildfire and flooding, may be a factor for some possible permitted restoration projects, but these are also unlikely to constitute a measurable proportion of overall demand, and project workers would not add substantial new demands to public services or require new or altered public service facilities. Any increases in demand for law enforcement, fire protection, and medical services related to this small change in population in any one county are expected to be negligible.

Construction activities for restoration projects permitted under the Order could temporarily increase response times for fire protection, law enforcement, and emergency medical services because the transportation and relocation of construction materials could increase traffic levels. Waterside restoration projects may use barges to transport construction materials, workers, and equipment, which could reduce impacts on response times. However, the extent of project components (i.e., the number, location, and project specifics) that would be implemented, which would factor into the potential for increased response times, is not known at this time. Project-related increases in demands for public services (e.g., from jobsite accidents and jobsite security during construction) related to future actions would be temporary or short-term and likely would not require new or altered public service facilities.

Construction activities for restoration projects permitted under the Order would not add substantial new demands to existing fire or police protection facilities, schools, or other public facilities. Increases in demands for public services, such as from jobsite accidents or jobsite security during construction of future project actions, would be temporary or short-term and are unlikely to require new or altered public service facilities because the overall numbers of workers at permitted projects would typically be a small portion of the population in any given project area. Furthermore, implementing restoration projects permitted under the Order would not result in the construction or modification of fire or police protection facilities, schools, or other public facilities. Thus, this impact would be **less than significant**. The Order does not include any general protection measures applicable to this impact.

#### **Effects of Constructed Facilities (Natural or Artificial Infrastructure) and Operations and Maintenance of those Facilities**

Operation of some restoration projects permitted under the Order would require maintenance and monitoring activities to support successful project establishment. However, routine maintenance activities would not result in substantially adverse physical traffic impacts that would lead to increased response times for fire protection, police protection, schools, and other public facilities. Therefore, operations and maintenance activities would not result in substantial adverse physical impacts associated with construction of new or modified fire or police protection facilities, schools, or other public facilities. This impact would be **less than significant**. The Order does not include any general protection measures applicable to this impact.