

4.13 Public Services and Utilities

Affected Environment

The construction, modification, or removal of facilities at the various Restoration Project sites could affect the following public services and utilities:

- electric utility service and natural gas supply,
- domestic water service,
- solid waste disposal,
- hazardous waste disposal,
- fire protection,
- police protection,
- wastewater, and
- emergency medical services.

A description of the public services and utilities located in Shasta and Tehama Counties and in the Restoration Project is provided below.

Natural Gas Supply and Electric Utility Service

Natural gas service in the area is provided by PG&E, which owns and operates distribution systems and provides services to retail customers. PG&E operates several natural gas pipelines in Shasta and Tehama Counties. Two gas pipelines run in a north-south direction through Burney and Shingletown and pass through the Restoration Project.

PG&E also provides electric utility service in the Restoration Project area. PG&E owns, operates, and maintains distribution systems, provides service to retail customers, and maintains numerous electric transmission lines that service the Hydroelectric Project facilities. PG&E also maintains a field office in Manton, California.

Two 500-kilovolt (kV) electric transmission lines operated by PG&E run north to south through the Restoration Project. Three PG&E 230-kV electric transmission lines and one Western Area Power Administration 230-kV electric transmission line run to the southwest from the Round Mountain Substation in Round Mountain to the Cottonwood Substation in Cottonwood. These four lines are located to the west of the Restoration Project.

Domestic Water Supply

Two general methods are used to deliver domestic water in the Tehama and Shasta County areas: community distribution systems and individual or on-site systems. In Tehama County, water for domestic use is secured primarily from the Sacramento River groundwater basin and, to a lesser extent, surface water flows. Domestic use water in Tehama County is provided by 66 separate distribution systems to water users in the incorporated areas of the county. Both Red Bluff and Corning have municipal water systems that serve their respective communities. The Rio Alta Water District provides a water distribution system to the Lake California area. The remaining rural portions of the county, including the Restoration Project, are served by smaller shared water systems and by individual wells that serve single-family homes. Manton, the only community near the Restoration Project, is supplied primarily with surface water from Cross Country Canal and Digger Creek (Tehama County Community Development Group 1983).

In Shasta County, water supply is derived primarily from surface flows. Surface water flows are allocated to supply primarily the south central region of Shasta County. This region covers the populated areas of the county that acquire their domestic water supply from water-controlling entities that include several large water purveyors (e.g., the Anderson-Cottonwood Irrigation District and the Bella Vista Water District). The Restoration Project is located outside the south central region. The remaining unincorporated and rural portions of the county, including the Restoration Project, are served primarily by groundwater supplied through individual wells.

Solid Waste Disposal

Two landfills operate in Shasta County. Located in the city of Anderson, the Anderson Solid Waste facility is operated as a Class III (nonhazardous) facility¹ and receives about 200 tons of solid waste from residential, commercial, industrial, and agricultural sources each day. Its maximum intake allowed by permit is 1,018 tons per day (tpd); it has a remaining capacity of 7,997,000 cubic yards, and its projected closure date is 2020 (CIWMB 2002). The facility is permitted to receive asbestos waste, shredder wastes, and special wastes. The West Central Landfill, located to the east of Redding, operates as a Class III (nonhazardous) facility. It receives about 400 tons of nonhazardous waste from residential, commercial, industrial, and agricultural sources each day. Its maximum allowed intake is 700 tpd; at last update it had a remaining capacity of more than 5,790,000 cubic yards, and its projected closure date is also 2020 (CIWMB 2002). A third landfill, the Simpson (Twin Brides) Landfill, is located near Igo and Ono, southwest of Redding and until recently operated as a Class II (nonhazardous) facility. The owners of this facility have filed for bankruptcy and

¹Class I landfills are zoned for hazardous waste, Class II landfills are zoned to handle sewage and wastewater, and Class III landfills are zoned to handle municipal solid waste.

the landfill is currently listed as “inactive” by the California Integrated Waste Management Board (CIWMB) (Graber pers. comm.), but if the site reopened it would be the closest landfill to the restoration project.

In addition to the three landfills, 12 transfer stations are located in Shasta County. The Shingletown Transfer Station is the closest to the Restoration Project.

One solid waste disposal site is in Tehama County. The Red Bluff Sanitary Landfill is a Class III (nonhazardous) facility and is located 2 miles northwest of Red Bluff. It receives tires and about 130 tons of solid waste from agricultural, construction/demolition, green materials, industrial, and mixed municipal sources each day. All solid wastes generated in Tehama County are dumped at the county-owned and privately operated Red Bluff site (Tehama County Community Development Group 1983). The landfill is expected to have sufficient capacity to operate until at least 2019 (Kohn pers. comm.).

Four limited-volume transfer stations are located in Tehama County. The Manton Transfer Station and the Paynes Creek Transfer Station are the closest to the Restoration Project.

Hazardous Waste Disposal

There are no hazardous waste treatment, storage, or disposal sites in the Restoration Project area and no hazardous waste disposal facilities in Tehama County (Kohn pers. comm.). According to the Department of Toxic Substance Control, two facilities in Shasta County (one in the City of Shasta Lake and the second near Redding Medical Center) accept hazardous waste (Shasta County 1998).

Fire Protection

The California Department of Forestry and Protection (CDF) has developed hazard severity zones based on such factors as fuel load (i.e., the amounts of grass, shrubs, or heavy woods located in an area), climate, and topography (i.e., the steeper the slope, the faster a fire will burn). The northern portion of the Restoration Project located in Shasta County is in a fire hazard severity zone rated “very high” (Shasta County 1998). In Shasta County, CDF is responsible for wildland fire² control outside U.S. Forest Service land or city boundaries. The CDF is responsible for fire control on approximately 1.1 million acres of private wildland and an additional 250,000 acres of U.S. Forest Service and BLM lands. As discussed in Section 4.6, “Land Use,” land ownership in the Restoration Project is predominantly private, with a smaller portion of BLM

²Wildland fires burn natural or wild vegetation located on undeveloped land. Non-wildland fires include structural, chemical, petroleum, electrical, vehicle, and other human-made material fires.

land. The U.S. Forest Service is responsible for wildland fire control on its lands. However, the Restoration Project contains no U.S. Forest Service land.

The CDF serves Shasta County with five battalions and 10 seasonal fire stations in the county and one battalion with three stations outside the county boundaries. In addition, there are 12 community fire districts, 19 volunteer fire companies, and, in Redding, the Shasta County Fire Station. The 19 volunteer fire companies and the Shasta County Fire Station are operated under the jurisdiction of the Shasta County Fire Department. The volunteer fire department in Shingletown is the closest to the Restoration Project. The Cottonwood Fire District has jurisdiction over the Restoration Project from the westernmost project area boundary east to the Coleman Powerhouse. The Cottonwood Fire District would be responsible for combating non-wildland fires in the area during the non-fire season (November through April). It would work with the CDF during the fire season (May through October) to contain all fires within their jurisdiction. The eastern portion of the Restoration Project located in Shasta County would be served by the CDF.

Tehama County is also divided into fire hazard severity zones, and the portion of the Restoration Project that is located in Tehama County is again entirely within a zone rated “very high” (Sherman pers. comm.; CDF 2001). Fire protection in the rural areas of Tehama County is provided by the Tehama County Fire Department. City governments provide fire protection in urban areas (Tehama County Community Development Group 1983). Fire protection is also provided by Schedule C stations staffed by volunteer fire companies. Fire protection in those portions of the Restoration Project located in Tehama County is provided by the Tehama County Fire Department, whose primary responsibility is non-wildland fires, and the CDF, whose year-round responsibility is wildland fires (Stelle pers. comm.).

Many of the local fire agencies overlap with CDF jurisdictions. Generally, local agencies are responsible primarily for non-wildland fires, while CDF responds primarily to wildland fires. However, in practice, all agencies overlap duties and work together when the need is present (Shasta County 1998).

Police Protection

Law enforcement needs for the Restoration Project will be served by Shasta and Tehama County. The portion of the Restoration Project within Shasta County is in the unincorporated, rural area of the county. This area receives general public safety, police protection, and law enforcement services from the Shasta County Sheriff’s Office in Redding, California. Three geographic patrol areas cover the county with stations in the Cities of Shasta Lake, Anderson, and Burney (Shasta County 1998). The Sheriff’s Office has 153 sworn deputy positions and 88 non-sworn positions. In addition, the Shingletown area, which is the community in Shasta County closest to the Restoration Project, also has resident deputies.

Law enforcement in the rural areas of Tehama County is provided by the Tehama County Sheriff's Department in Red Bluff. The portion of the Restoration Project in Tehama County is primarily in the unincorporated area of the county. Unincorporated areas of Tehama County receive general public safety, police protection, and law enforcement services from this office. In addition, the police departments in both Red Bluff and Corning patrol three geographic patrol areas (CopQuest.org 2001).

Wastewater Services

Wastewater in Shasta and Tehama Counties is treated in one of two ways: (1) community collection and treatment with discharge or (2) individual treatment at the site with return to the ground.

Several community wastewater collection and treatment systems serve the incorporated areas of Shasta and Tehama Counties. In Shasta County, the seven community wastewater collection and treatment systems are:

- three major community wastewater treatment systems in Anderson, Redding, and Shasta Lake;
- community wastewater systems in Cottonwood and Palo Cedro operated by county service areas; and
- systems in the communities of Burney and Fall River Mills that are served by centralized wastewater treatment facilities.

In Tehama County, the five community collection wastewater treatment systems are:

- the City of Red Bluff wastewater treatment system,
- the City of Corning wastewater treatment system,
- the Rio Alta Water District (serving the Lake California area),
- Tehama County Sanitation District No. 1 (serving the immediate Mineral area), and
- the Gerber sanitary sewer system.

In areas not served by these systems, all wastewater is treated by individual systems that use either septic/leachfield systems or seepage pits. Similar to other unincorporated areas in Tehama County, Manton, the only community near the Restoration Project, is served with wastewater treatment by individual septic tanks. The Restoration Project is located in the rural areas in the county; therefore, residents in the area would likely be served by individual systems.

Emergency Medical Services

Numerous hospitals provide emergency medical services in Shasta and Tehama Counties. The hospitals that are the closest to the Restoration Project include the Redding Medical Center and Mercy Medical Center, both located in Redding, and St. Elizabeth Community Hospital, located in Red Bluff.

Regulatory Setting

There are no regulations applicable to the project in the area of public services and utilities. The project does not consume services and utilities.

Environmental Consequences

Summary

No significant public services and utilities impacts are associated with the No Action Alternative or the Action Alternatives (Five Dam Removal, No Dam Removal, Six Dam Removal, and Three Dam Removal) when mitigation measures are applied. Proposed activities at the Restoration Project sites may increase demands on fire, police, and emergency medical services because the project area is in a very high fire hazard severity zone, which means that the chance of a fire igniting and spreading is relatively high. Although the Restoration Project could potentially increase the demand on fire, police, and emergency medical services, other public services and utilities in the Restoration Project and surrounding area would not be affected by the implementation of the Restoration Project.

Impact Significance Criteria

Based on specific project concerns, impacts would be considered significant for this analysis if implementation of the Restoration Project would:

- reduce the ability of utility providers (electric, natural gas, water, and wastewater) to maintain the current level of service to their customers in the area;
- reduce the ability of solid waste disposal facilities to absorb an additional waste stream without substantially altering their ability to meet current life expectancy projections;
- reduce the ability of fire and police departments to maintain current levels of service to area residents; or
- increase the potential release or disturbance of hazardous materials or waste.

Impact Assessment

As applicable, the General Environmental Protection Measures listed in the introduction to this chapter shall be used for this resource.

No Action Alternative

The No Action Alternative would not affect public services and utilities. The No Action Alternative is not expected to contribute to the increased usage of those public services and utilities identified above.

Five Dam Removal Alternative (Proposed Action)

Impact 4.13-1 Significant—Proposed activities at the Restoration Project sites may increase demands on fire, police, and emergency medical services.

Activities proposed under the Five Dam Removal Alternative have the potential to result in temporary increased demands on fire protection, police protection, and emergency medical services that may be needed in the area. The proposed activities would result in additional temporary traffic and workers in the general area of the Restoration Project. The maximum number of construction workers required to implement this alternative is 360. It is assumed that a maximum of 360 workers distributed over several Battle Creek sites could be engaged in construction activities at any given time. While activity, traffic, and personnel in the area of the Restoration Project would temporarily increase, this increase is not expected to exceed, under normal circumstances, the capacity of existing protective and emergency response demands in the area. However, because the proposed project is in a “very high” fire hazard severity zone, which means that the chance of a fire igniting and spreading is relatively high in this area, the Restoration Project could potentially increase the demand on fire services. This impact is considered significant. Implementing the following mitigation measures would reduce this impact to a less-than-significant level.

Mitigation Measures for Impact 4.13-1. The construction contractor will follow these measures to minimize the need for protective and emergency response services:

- Practicable and conventional precautions will be taken by the contractor to ensure the safety of workers and the general public by adequately securing work sites and fencing hazardous areas and trenches during construction activities. This will be the responsibility of the contractor and will be made a part of the standards and specifications included in their contract.
- Physical barriers and sign postings (including “No Trespassing”) consistent with standard construction safety management practices will be used by the contractor to discourage and limit access to construction areas. This will be

the responsibility of the contractor and will be made a part of the standards and specifications included in their contract.

- The contractor will provide notice to county law enforcement and fire protection agencies during proposed activities. This requirement will be included in the standards and specifications made a part of the contract.
- Standard precautions and approaches required by the CDF, and Shasta and Tehama County Fire Departments when dealing with very high fire hazard severity zones will be adhered to during construction activities by the contractor. The lead agencies will prepare a fire plan in consultation with the CDF and Shasta and Tehama County Fire Departments, as outlined in the *Industrial Operations Fire Prevention Field Guide* published by the CDF and State Fire Marshal, and filing of the plan with the appropriate fire protection agency prior to beginning construction. Precautions will include, but are not limited to, the use of Forest Service–approved spark arresters on all internal combustion engines, preplacement of fire suppression equipment, restricting smoking and equipment refueling to cleared areas, and restricting activities during “Red Flag” conditions. The fire plan will be included in the standards and specifications made a part of the contract for construction work.

Impact 4.13-2 Less than Significant—Proposed activities at the Restoration Project sites may increase demand on solid waste and hazardous waste disposal facilities.

Construction activities at the dam sites associated with the Five Dam Removal Alternative would generate small volumes of solid waste and potentially small volumes of hazardous waste. The solid waste would include standard construction waste, concrete, litter, and miscellaneous reinforcing steel and metal. The hazardous waste could include materials exposed during construction activities such as PCBs, lead-based paint, asbestos, and pentachlorophenol. These hazardous materials are discussed in detail in Section 4.12, “Public Health and Safety.” In many cases, the concrete and rubble materials would be used on site or broken down into small pieces and distributed downstream, thereby avoiding the need for their disposal in a landfill. As much as 3,000 cubic yards of construction waste would need to be trucked to an appropriate landfill.

In addition, because many of the Restoration Project sites would be in remote locations, it is assumed that contractors would provide self-contained collection facilities and transport the minimal quantities of worker-generated solid waste to appropriate disposal facilities.

Three solid waste disposal facilities and a number of transfer stations are located in Shasta and Tehama Counties, and two hazardous waste disposal facilities are located in Shasta County. These disposal facilities would absorb disposal materials generated at the Restoration Project sites without significantly affecting existing landfill capacity. At last count by the CIWMB, there was more than 12,000,000 cubic yards of capacity remaining among the three solid waste disposal facilities (CIWMB 2002). An adequate number of trash bins,

dumpsters, and other appropriate containers will be kept on site to minimize the potential for adverse impacts associated with litter in the Restoration Project.

Because local disposal facilities have the capacity to absorb disposal materials generated at the Restoration Project sites without significantly affecting existing landfill capacity, this impact is considered less than significant.

Impact 4.13-3 Less than Significant—Relocation or removal of electric transmission facilities could temporarily affect services provided by utilities.

Electricity is provided directly by power lines and transmission poles that both extend and provide power to some of the individual Restoration Project sites. As some of the activities proposed under the Five Dam Removal Alternative would be implemented, some of those lines and poles may need to be relocated or temporarily removed. For example, it is estimated that power line relocation would be required at several sites and that power conduits would be reconfigured to fit the new facilities at some sites after construction has been completed. The power lines and poles that would be subject to disruption serve only the facilities at the specific sites, and no widespread impacts on power supply are anticipated. Power line relocation or removal, therefore, would not result in a significant impact. During necessary power disruptions, portable generators would provide power at the site. Because none of existing natural gas supply facilities would need to be relocated, there would be no impacts on them. This impact is less than significant.

No Dam Removal Alternative

Impact 4.13-4 Significant—Proposed activities at the Restoration Project sites may increase demands on fire, police, and emergency medical services.

This impact is similar to Impact 4.13-1 described above under the Five Dam Removal Alternative. It is estimated that 240 construction workers would be needed, resulting in potentially slightly smaller impacts on fire, police, and emergency medical services than under the Five Dam Removal Alternative. However, because the proposed project is in a very high fire hazard severity zone, which means that the chance of a fire igniting and spreading is relatively high in this area, the Restoration Project could potentially increase the demand on fire services. This impact is considered significant. Implementing the Mitigation Measure for Impact 4.13-1 would reduce this impact to a less-than-significant level.

Impact 4.13-5 Less than Significant—Proposed activities at the Restoration Project sites may increase demand on solid waste and hazardous waste disposal facilities.

This impact is similar to Impact 4.13-2 described above under the Five Dam Removal Alternative. It is estimated that 2,700 cubic yards of solid or hazardous waste materials would be generated as a result of the implementation of the No Dam Removal Alternative, which is less than the 3,000 cubic yards that would be

generated by the Five Dam Removal Alternative. Therefore, the No Dam Removal Alternative would also have a less-than-significant impact on waste disposal facilities.

Impact 4.13-6 Less than Significant—Relocation or removal of electric transmission facilities could temporarily affect services provided by utilities.

This impact is similar to Impact 4.13-3 described above under the Five Dam Removal Alternative. The impact on utility services would remain less than significant as well under the No Dam Removal Alternative because this alternative would affect electrical and gas infrastructure in the same ways as described under the Five Dam Removal Alternative.

Six Dam Removal Alternative

Impact 4.13-7 Significant—Proposed activities at the Restoration Project sites may increase demands on fire, police, and emergency medical services.

This impact is similar to Impact 4.13-1 described above under the Five Dam Removal Alternative. It is estimated that 360 construction workers would be needed for the Six Dam Removal Alternative, similar to the number of workers required for the Five Dam Removal Alternative and resulting in similar impacts on fire, police, and emergency medical services. However, because the proposed project is in a very high fire hazard severity zone, which means that the chance of a fire igniting and spreading is relatively high in this area, the Restoration Project could potentially increase the demand on fire services. This impact is considered significant. Implementing the mitigation measure for Impact 4.13-1 would reduce this impact to a less-than-significant level.

Impact 4.13-8 Less than Significant—Proposed activities at the Restoration Project sites may increase demand on solid waste and hazardous waste disposal facilities.

This impact is similar to Impact 4.13-2 described above under the Five Dam Removal Alternative. It is estimated that that approximately 3,000 cubic yards of solid or hazardous waste materials would be generated during the implementation of the Six Dam Removal Alternative, similar to the amount of solid or hazardous waste materials generated by the Five Dam Removal Alternative. Therefore, the Six Dam Removal Alternative would also have a less-than-significant impact on waste disposal facilities.

Impact 4.13-9 Less than Significant—Relocation or removal of electric transmission facilities could temporarily affect services provided by utilities.

This impact is similar to Impact 4.13-3 described above under the Five Dam Removal Alternative. The impact on utilities services would remain less than significant as well under the Six Dam Removal Alternative because this alternative would affect electrical and gas infrastructure in the same ways as described under the Five Dam Removal Alternative.

Three Dam Removal Alternative

Impact 4.13-10 Significant—Proposed activities at the Restoration Project sites may increase demands on fire, police, and emergency medical services.

This impact is similar to Impact 4.13-1 described above under the Five Dam Removal Alternative. It is estimated that 290 construction workers would be needed for the Three Dam Removal Alternative, resulting in slightly fewer impacts on fire, police, and emergency medical services than under the Five Dam Removal Alternative. However, because the proposed project is in a very high fire hazard severity zone, which means that the chance of a fire igniting and spreading is relatively high in this area, the Restoration Project could potentially increase the demand on fire services. This impact is considered significant. Implementing the mitigation measure for Impact 4.13-1 would reduce this impact to a less-than-significant level.

Impact 4.13-11 Less than Significant—Proposed activities at the Restoration Project sites may increase demand on solid waste and hazardous waste disposal facilities.

This impact is similar to Impact 4.13-2 described above under the Five Dam Removal Alternative. It is estimated that only 2,900 cubic yards of solid or hazardous waste materials would be generated during the implementation of the Three Dam Removal Alternative, which is slightly less than the amount of solid or hazardous waste materials generated by the Five Dam Removal Alternative. Therefore, the Three Dam Removal Alternative would also have a less-than-significant impact on waste disposal facilities.

Impact 4.13-12 Less than Significant—Relocation or removal of electric transmission facilities could temporarily affect services provided by utilities.

This impact is similar to Impact 4.13-3 described above under the Five Dam Removal Alternative. The impact on utilities services would remain less than significant as well under the Three Dam Removal Alternative because this alternative would affect electrical and gas infrastructure in the same ways as described under the Five Dam Removal Alternative.

Cumulative Impacts

This section addresses cumulative public services and utilities impacts associated with the Proposed Action and past, present, or probable future projects that would occur in the Battle Creek Watershed. Chapter 6 discusses projects that are planned for the same region of Shasta and Tehama Counties and examines their relationships to the Proposed Action. Some of the planned projects, such as improvements to the Coleman National Fish Hatchery, the Lassen Lodge hydropower project, gravel removal agreements, the U.S. Forest Service sediment reduction programs, and the Battle Creek spawning gravel study and restoration, would make demands on local public services and utilities that are similar to the impacts of the Proposed Action. The timelines for these related

projects are not currently known, but if the construction phases for these projects occur concurrently with the Proposed Action, the cumulative impacts could be significant.