

4.13 Hazardous Materials / Public Health

This section discusses the hazardous materials and other hazard issues associated with project construction and project operations. The issues evaluated include the potential for toxic substances in soil and groundwater resulting from past use, spills, or leaks of hazardous materials into the ground in proposed construction areas as well as the potential of the project to generate and discharge hazardous materials during construction and operation.

This section also discusses potential impairment of emergency response or evacuation plans and the risk of wildland fires. In addition, specific to the proposed power supply facilities, this section addresses the issue of electric and magnetic fields (EMF) that could be associated with additional electrical transmission lines and substations proposed under some project alternatives.

4.13.1 Affected Environment

Regulatory Setting

Federal and State

Hazardous Materials and Waste Handling

The federal Resource Conservation and Recovery Act of 1976 (RCRA) established a “cradle-to-grave” regulatory program governing the generation, transportation, treatment, storage, and disposal of hazardous waste. Under RCRA, individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements. In California, the Department of Toxic Substances Control (DTSC) regulates the generation, transportation, treatment, storage, and disposal of hazardous material waste. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Throughout both Contra Costa County and Alameda County, a hazardous materials management plan must be prepared and submitted to the County by businesses that use or store certain quantities of hazardous materials.

Hazardous Materials Transportation

The U.S. Department of Transportation regulates hazardous materials transportation on all interstate roads. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, federal and state agencies determine driver-training requirements, load-labeling procedures, and container specifications. Although special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads.

Worker Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the work place. The California Division of Occupational Safety and Health (Cal-OSHA) and the federal Occupational Safety and Health Administration are the agencies responsible for assuring worker safety in the workplace.

Cal-OSHA assumes primary responsibility for developing and enforcing standards for safe workplaces and work practices. At sites known to be contaminated, a site safety plan must be prepared to protect workers. The site safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

California Department of Forestry and Fire Protection

The California Public Resources Code (PRC) includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors¹ on construction equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided onsite for various types of work in fire-prone areas. The California Public Resources Code requirements would apply to construction activities in any areas designated by the California Department of Forestry and Fire Protection as a Wildland Area that May Contain Substantial Forest Fire Risks and Hazards pursuant to Section 4125 (CDF, 2000).

Electric and Magnetic Fields

No federal regulations have established environmental limits on the strengths of fields from powerlines. The State of California Department of Education enacted regulations that require minimum distances between a new school and the edge of a transmission line right-of-way (ROW). The setback distances are 100 feet from the edge of the transmission line ROW for 50- to 133-kilovolt (kV) lines, 150 feet from the edge of the transmission line ROW for 220- to 230-kV lines, and 350 feet from the edge of the transmission line ROW for 500- to 550-kV lines. These distances were not based on specific biological evidence, but on the fact that fields from powerlines drop to near background levels at those distances.

In 1993, the California Public Utilities Commission (CPUC) authorized the state's investor-owned utilities to implement "no and low-cost EMF avoidance measures" in the construction of new and upgraded utility projects. A CPUC decision on January 27, 2006, affirmed the Commission's November 1993 decision on a low-cost/no-cost policy to mitigate EMF exposure for new utility transmission and substation projects. As a measure of low-cost mitigation, the CPUC continues to use the benchmark of 4 percent of transmission and substation project costs for EMF mitigation, and to combine linked transmission and substation projects. In addition, the CPUC adopted rules and policies to improve utility design guidelines for reducing EMF levels near areas of human habitation; these guidelines include use of alternative sites, increased ROW, placement of facilities underground, and similar methods to reduce EMF levels at transmission, distribution,

¹ A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

and substation facilities by increasing the distance between people and facilities. As a federal agency, Western Area Power Administration (Western) is not subject to state regulations related to EMF.

California has no other rules governing EMF; however, CPUC-regulated utilities and municipal utilities use ratepayer funds to pay for their share of EMF research development costs. A \$5.6 million, 4-year, non-experimental research program to be directed by Cal-OSHA was included in CPUC's January 27, 2006, decision. This program will provide utility participation in state, national, and international research to benefit ratepayers.

Local

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government and private agencies. Responding to hazardous materials incidents is one part of this plan, as is responding to intentional acts of destruction. Another part involves development of a downstream evacuation plan for areas within the potential inundation area. For both Contra Costa County and Alameda County, the plan is administered by the California Office of Emergency Services, which coordinates the responses of other agencies, including the California Environmental Protection Agency, CHP, California Department of Fish and Game, Regional Quality Control Board, and local fire departments. CCWD has a Los Vaqueros Reservoir Emergency Evacuation Plan for the current facility, discussed in Section 4.5 Local Hydrology, Drainage and Groundwater, Impact 4.5.5, which addresses the potential for inundation by dam or levee failure.

Contra Costa County also adopted the *Contra Costa County Hazardous Materials Area Plan*, which outlines the procedures that County regulatory and response agencies will use to coordinate management, monitoring, containment, and removal of hazardous materials in the event of an accidental release (Contra Costa County, 1996). Alameda County administers similar programs such as the *Hazardous Materials Business Plan Program* and the *California Accidental Release Program*. The former establishes minimum statewide standards for Hazardous Materials Business Plans, and the accidental release program requires businesses that handle more than threshold quantities of an extremely hazardous substance to develop a Risk Management Plan. Contractors for large public works projects that use fuels and other hazardous materials are required to develop Hazardous Materials Business Plans.

Contra Costa County

The Contra Costa County General Plan contains goals and policies to ensure public safety from hazardous materials in the county. These goals and policies include the regulation of stored hazardous materials and wastes (10-62); the required secondary containment and examination of stored toxic materials (10-63); the development of fire protection and prevention requirements for open space and rural area development (7-71); and the encouragement of wildland fire prevention activities (7-80) (Contra Costa County, 2005). Specific Contra Costa County goals and policies are listed in Appendix E-2.

Alameda County General Plan – East County Area Plan

The East County Area Plan (ECAP) addresses hazards, including wildland fires and airport hazards. The purpose of this plan is “to present a clear statement of the County’s intent concerning future development and resource conservation within East County.” The main policy relevant to the proposed project requires adherence to the provisions of the Alameda County Fire Protection Master Plan and Fire Hazard Mitigation Plan (319) (Alameda County, 2002). Specific ECAP goals and policies are listed in Appendix E-1.

Environmental Setting

Hazardous Materials

In accordance with federal and state laws, materials (including wastes) may be considered hazardous if they are specifically listed by statute as such or if they are poisonous (toxic); if they can be ignited by open flame (ignitable); if they can corrode other materials (corrosive); or if they can react violently, explode, or generate vapors when mixed with water (reactive). The term “hazardous material” is defined by law as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.²

In some cases, past industrial or commercial activities at a site could have resulted in hazardous materials spilling or leaking to the ground, resulting in soil and/or groundwater contamination. Federal and state laws require that hazardous materials be specially managed and that excavated soils with concentrations of contaminants, such as lead, gasoline, or industrial solvents that are higher than certain acceptable levels be specially managed, treated, transported, and/or disposed of as a hazardous waste. The California Code of Regulations, Title 22, Section 66261.20-24 contains technical descriptions of characteristics that would cause a soil to be designated a hazardous waste. The California regulations are compliant with the federal regulations and in most cases are more stringent.

Hazard, Risk, and Exposure

Factors that influence the health effects of exposure to hazardous material include the dose to which a person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility. The means by which an individual is exposed to a chemical agent is classically defined through the four basic exposure pathways: inhalation, ingestion, bodily contact, and injection.

The proposed project facilities are in southeastern Contra Costa County and northeastern Alameda County in an area that includes primarily open space and agricultural land, the majority of which is used for grazing. The closest communities to any project component are the towns of Byron and Discovery Bay, at distances of 4 and 6 miles, respectively, east/northeast and northeast from the Los Vaqueros Reservoir Watershed. The town of Byron has a relatively small population (fewer than 900 residents) and includes residential, commercial, and light industrial land uses. Discovery Bay, with about 9,000 residents, is known for its residential and water-based

² State of California, Health and Safety Code, Chapter 6.95, Section 25501(o).

recreation land uses. None of the project facilities would be in the towns of Byron or Discovery Bay, although the Delta–LV Pipeline extends along SR 4, which bounds the Discovery Bay community on the south.

Existing hazardous materials use in the project region varies and likely includes petroleum hydrocarbons and those hazardous materials common to agriculture, including pesticides, fertilizers, and fuels. Historical hazardous materials use likely involved the application of pesticides on the agricultural lands used for growing crops. Hazardous materials may also be present in surface soils along roadways as a result of accidental releases. In addition, subsurface soil or groundwater contamination related to hazardous material use is present in isolated commercial and light industrial properties throughout the region, discussed in the following paragraphs

In March 2007, Environmental Data Resources (EDR), Inc. conducted a review of regulatory agency databases for the project area to inventory sites of past hazardous materials releases (see **Table 4.13-1**) (EDR, 2007a and 2007b). The EDR database review was supplemented with a review of the online database, Geotracker, maintained by the State Water Resources Control Board (SWRCB, 2007), the Cortese List/Envirostor database maintained by the State Department of Toxic Substances Control (DTSC, 2007), and the Hazardous Materials Incident Search database produced by the Contra Costa County Hazardous Materials Program (CCCHMP, 2007).

The EDR database review identified four known or potential areas of contamination within a 1-mile radius of the proposed Transfer-Bethany Pipeline. Most of these areas would not affect or be affected by project construction because of their distances from the pipeline alignment. The closest recorded site to any of the proposed project components is the Souza Ranch landfill, which is an active facility that disposes of biosolids. This permitted landspreading³ facility is between Armstrong Road and Vasco Road, about a quarter mile east of the proposed Transfer-Bethany Pipeline. No violations or areas of concern are reported for this facility. In and around Byron Airport, there are other similar landspreading facilities, but they are farther away from the proposed Transfer-Bethany Pipeline and more than 1 mile from the Western Transmission Line or any of the other Power Supply elements.

Other potential sites where hazardous materials are handled close to the proposed project components include a relatively new gasoline service station at the northeast corner of Bixler Road and SR 4, and next to the proposed Delta-Transfer Pipeline; a boat-storage yard at the southwest corner of that same intersection, also next to the proposed Delta-Transfer Pipeline; and the Unimin sand plant at the southwest corner of the intersection of Vasco Road and Camino Diablo Road, next to the proposed Transfer-Bethany Pipeline. However, none of these facilities were listed on any of the databases reviewed, which indicates that no reported leaks or spills are associated with these sites. In addition, according to the available databases reviewed as part of this analysis, no hazardous materials leaks or spills have occurred within the Los Vaqueros Watershed.

³ Landspreading organic material involves incorporating the materials into the soil where they are biologically broken down and remain in the soil as nutrients.

**TABLE 4.13-1
DESCRIPTION OF ENVIRONMENTAL DATABASES**

Acronym / Permitted Uses	Name and Description of Database
CONTRA COSTA Sites	Contra Costa County Hazardous Materials Incident Search. Sites in Contra Costa County with Underground Storage Tanks (USTs) as well as hazardous waste generators and facilities that have submitted a hazardous materials business plan.
DRY CLEANERS	The Dry Cleaner Facilities Database. Dry cleaner-related facilities that have U.S. EPA identification numbers.
CA SLIC	Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing. Sites under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board. Found on the Geotracker Database.
CALSITES	Previously referred to as the Abandoned Sites Program Information System (ASPIS), this list identifies potential hazardous waste sites, which are then screened by the DTSC for further action. Now replaced by DTSC's Envirostor.
NPL	National Priorities List compiles over 1,200 sites for priority cleanup under the Superfund Program.
CORTESE	Cortese Hazardous Waste and Substances Site List. A compilation of sites listed in the LUST, Solid Waste Information System (SWF/LF), and CALSITES databases.
LUST	Leaking Underground Storage Tanks (LUST). A compilation of LUST sites.
REF	Unconfirmed Properties Referred to Another Agency. Properties where contamination has been confirmed and that were determined not to require direct DTSC Site Mitigation Program action or oversight.
VCP	Voluntary Cleanup Program Properties. Low-threat properties with either confirmed or unconfirmed releases, where the project proponents have requested that the DTSC oversee investigation and/or cleanup activities.
US Brownfields	Maintained by the U.S. EPA, the US Brownfields database lists abandoned sites that have known or suspected contamination that are currently underutilized.
Toxic Pits	Maintained by the State Water Resources Control Board, the Toxic Pits database lists sites suspected of containing hazardous substances that have not yet been cleaned up.
State Landfill	Solid waste facilities and landfills that are active, closed, or inactive.
Indian LUST	Leaking underground storage tanks on Indian lands.

ASPIS: Abandoned Sites Program Information System
DTSC: Department of Toxic Substances Control
LUST: Leaking Underground Storage Tanks
SWF/LF: Solid Waste Information System
UTS: Underground Storage Tank

SOURCE: EDR, 2007a and 2007b.

Naturally Occurring Asbestos

Asbestos is a naturally occurring fibrous group of minerals. Chrysotile, which is found in the serpentine group,⁴ is the most common asbestos mineral in California. Small amounts of chrysotile asbestos, a fibrous form of serpentine minerals, are common in serpentinite. When disturbed, the asbestos fibers can become airborne and present a public health risk when inhaled. The California Geological Survey has mapped California for the occurrence of ultramafic rocks, which have the

⁴ Serpentine is a naturally occurring group of minerals that can be formed when ultramafic rocks are metamorphosed during uplift to the earth's surface. Serpentinite is a rock consisting of one or more serpentine minerals. This rock type is commonly associated with ultramafic rock along earthquake faults.

highest potential for serpentine. A review of the map shows that the proposed project elements are not anywhere near these mapped locations; therefore, the potential for encountering naturally occurring asbestos during construction is considered very low (CGS, 2000).

Wildland Fire

The California Department of Forestry and Fire Protection has identified two types of wildland fire risk areas: (1) Wildland Areas That May Contain Substantial Forest Fire Risks and Hazards, and (2) Very High Fire Hazard Severity Zones. Each risk area contains requirements to reduce the potential risk of wildland fires fire safety, such as through regulations that restrict the use of equipment that may produce a spark, flame, or fire; that require the use of spark arrestors on construction equipment with an internal combustion engine; that specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and that specify fire-suppression equipment that must be provided onsite for various types of work in fire-prone areas.

The proposed project facilities lie partially within an area considered to be a Wildland Area That May Contain Substantial Forest Fire Risks and Hazards. The majority of the open space west of the Byron Highway/railroad tracks is mapped as a hazard area (CDF, 2000). No Very High Fire Hazard Severity Zones are within the project vicinity. Therefore, public safety requirements to minimize the risk of wildland fire would apply to construction activities within the Los Vaqueros Watershed (including construction areas for the Dam Raise, appurtenant facilities, and borrow areas). Affected conveyance facilities include the western portion of the Delta-Transfer Pipeline; Transfer Facility Expansion; Transfer-LV Pipeline; and the western portion of the Transfer-Bethany Pipeline. Power Supply Option 2 (Western & Pacific Gas and Electric [PG&E]), with a potential new PG&E substation, would also be in the identified wildland fire hazard area. The proposed recreation facilities are within the CCWD watershed and would be subject to these code requirements as well.

Electric and Magnetic Fields

Electrical transmission facilities generate EMF. The possibility of adverse health effects from EMF exposure has increased public concern in recent years about living near high-voltage transmission lines. The available evidence has not established that such fields pose a significant health hazard to exposed humans. Therefore, in light of present uncertainty, CPUC guidelines are incorporated into the design of new facilities to reduce such fields through no cost and low cost (up to 4 percent of facility cost) measures until the issue is better understood.

As stated in the Regulatory Setting, guidelines adopted by the CPUC include use of alternative sites, increased ROW, placement of facilities underground, and similar methods to reduce EMF levels at transmission, distribution, and substation facilities by increasing the distance between electrical facilities and human habitation areas. As previously discussed, no federal or state regulations have established environmental limits on the strengths of fields from powerlines. Furthermore, as a federal agency, Western is not subject to state regulations; however, Western may voluntarily incorporate CPUC requirements into a project design. Additional background information is provided prior to the discussion of possible EMF effects.

Both voltage and current are required to transmit electrical energy over a transmission line. Voltage represents the potential for an electrical charge to do work and is measured in volts (V) or kV. Voltage is the source of an electrical field. Current, a flow of electrical charge measured in amperes, is the source of a magnetic field.

All transmission lines generate EMF. The existing and new transmission lines would generate similar EMF. The electrical effects of a transmission line can be characterized as “corona effects” and “field effects.” Corona is the electrical breakdown of air into charged particles. It is caused by the electrical field at the surface of conductors. Field effects are induced currents and voltages, as well as related effects that might occur due to EMF at ground levels. Issues of concern related to EMF include: human health and safety hazards from direct and cumulative EMF exposure, EMF effects on livestock, and television interference.

Corona Effects

Corona can occur on the conductors, insulators, and hardware of an energized high-voltage transmission line. Corona on conductors occurs at locations in which the field has been enhanced by protrusions, such as nicks, insects, dust, or drops of water. During fair weather, the number of these sources is small, and the corona effect is less than significant. However, during wet weather, the number of these sources increases and corona effects are much greater. Effects of corona are audible noise, radio and television interference, visible light, and photochemical reactions.

Field Effects

The electric field created by a high-voltage transmission line extends from the energized conductors to other conducting objects such as the ground, transmission structures, vegetation, buildings, vehicles, and persons. The electric field is measured in units of kV/meter, at a height of 1 meter above ground level. Field effects can include induced currents, steady-state current shocks, spark discharge shocks and, in some cases, field perception.

Induced Currents. When a conduction object, such as an ungrounded fence, vehicle, or person is placed in an electric field, current and voltages are induced. The magnitude of the induced current depends on the electric field strength and the size and shape of the object. The induced currents and voltages represent a potential source of nuisance shocks near a high-voltage transmission line. Typically, high-voltage transmission lines are placed high above objects to reduce the potential for nuisance shocks. In addition, permanent structures near transmission lines, such as fences, gates, and metal buildings, are grounded.

Spark-Discharge Shocks. If the induced voltage was sufficiently high on an ungrounded object, a spark-discharge shock would occur as contact is made with the ground. Under typical transmission line design practices, the magnitude of the electric field would be low enough that this type of shock would occur rarely, if at all. Carrying or handling conducting objects, such as irrigation pipes, under transmission lines can result in spark discharges that are a nuisance. The primary hazard with irrigation pipes or any other long objects, however, is electrical flashover from the conductors if a section of the pipe is inadvertently tipped up near the conductors.

Steady-State Current Shocks. Steady state currents are those that flow continuously after a person contacts an object, such as an ungrounded fence, and provides a path to the ground for the induced current. The effects of these shocks may include involuntary movement of a person.

Field Perception and Neurobehavioral Responses. When the electric field under a transmission line is sufficiently strong, it can be perceived by hair rising on the back of one's hand. At locations directly under the conductors, it is possible for some individuals to perceive the field while standing on the ground. Perception of the field does not occur at or beyond the edge of a ROW.

Magnetic Field

A 60-hertz magnetic field is created in the space around transmission-line conductors by the electric current flowing in the conductors. The magnetic field is expressed in units of microteslas (μT) and in gauss or milligauss (mG), where 1 mG is one thousandth of a gauss ($1 \mu\text{T} = 10\text{mG}$). The maximum magnetic fields of transmission lines are similar to the maximum magnetic fields measured near some common household appliances. The actual level of the magnetic field would vary as the current on the transmission line and the distance to the line varies. There are no established health-based limits exist for peak magnetic fields. A possible short-term effect associated with magnetic fields from alternating current transmission lines is induced voltages and currents in long-conducting objects such as ungrounded fences and above-ground pipelines.

Health Effect

Before health-based concern developed, measures to reduce field effects from powerline operations were mostly aimed at the electric field component, which can cause radio noise, audible noise, and nuisance shocks. The present focus is on magnetic fields, because these can penetrate building materials and potentially produce the types of health impacts at the root of the present concern.

It is important to note that an individual in a home could be exposed for short periods to much stronger fields while using some common household appliances (NIEHS, 2002). There is also discussion of cell phones as a source of EMF, although it is measured in relatively low levels. Scientists have not established which types of exposures would be more biologically meaningful. High-level magnetic field exposures regularly occur in areas other than the powerline environment. Examples of magnetic fields at particular distances from household appliance surfaces are listed in **Table 4.13-2**.

As described in Section 3.5.5 Power Supply Infrastructure, Alternatives 1, 2, and 3 would involve construction of new power supply facilities to support the operation of the expanded Los Vaqueros system. New electrical transmission lines would be extended to the new Delta Intake and Pump Station under Alternatives 1 and 2, and to the Expanded Transfer Facility under Alternatives 1, 2, and 3. A new electrical substation would be required in the project area under Alternatives 1, 2, and 3, depending on which of two power supply options is adopted. No new power supply facilities are included in Alternative 4.

**TABLE 4.13-2
MAGNETIC FIELDS FROM HOUSEHOLD APPLIANCE SURFACES**

Appliance	Milligauss at 1 foot	Milligauss at 3 feet
Can opener	7.19 to 163.02	1.3 to 6.44
Clock	0.34 to 13.18	0.03 to 0.68
Clothes iron	1.66 to 2.93	0.25 to 0.37
Coffee machines	0.09 to 7.30	0 to 0.61
Computer monitor	0.20 to 134.7	0.01 to 9.37
Dishwasher	4.98 to 8.91	0.84 to 1.63
Fax machines	0.16	0.03
Portable fan	0.04 to 85.64	0.03 to 3.12
Range	0.60 to 35.39	0.05 to 2.83
Television	1.80 to 12.99	0.07 to 1.11

SOURCE: Zaffanella, 1997

Two options for provision of this additional power supply are evaluated. Under Power Option 1, Western would extend additional transmission lines to both the new Delta Intake and Pump Station and the Expanded Transfer Facility from a new Western substation (see Figure 3-26). Under Power Option 2, PG&E would construct a new substation in the project area to extend power to the Expanded Transfer Facility (see Figure 3-27).

Power Option 1 (Western Only). Western would provide power to the new Delta Intake and Pump Station and the Expanded Transfer Facility. An existing 230-kV transmission line along Western's existing transmission corridor from Western's Tracy Substation to a new substation in the project area would not require any upgrades. From this proposed new substation a new 69-kV transmission line would be extended east to the new Delta Intake and Pump Station, next to the existing 69-kV line that extends to the existing Old River Intake and Pump Station. No residences are located along the alignment for the new 69-kV line that would extend from the substation to the new Delta Intake and Pump Station. At the new intake site, however, this new powerline would be a minimum of 500 feet from an existing farmhouse across Old River on Victoria Island.

The siting zone of the proposed 2-acre Western substation is at the eastern terminus of Camino Diablo Road, where Western's existing 230-kV towers end and the 69-kV power poles that extend to the Old River Pump Station begin. The new substation would have the capacity to step power down from 230 kV to 69 kV and 21 kV. A farmhouse is about 100 feet east of the existing transmission corridor; which contains two PG&E 500-kV lines as well as a 69-kV Western powerline. Because the 2-acre substation could be in any part of the siting zone, the substation could be as far as 1,275 feet from this house.

To serve the Expanded Transfer Facility under Option 1, a new 21-kV distribution line would be extended from the new substation west to the Transfer Facility. The new transmission line would parallel the existing 230-kV transmission line for a segment and then would extend westward, generally traversing the same alignment as the Delta-Transfer Pipeline to the Expanded Transfer Facility.

The proposed Delta-Transfer Pipeline would be constructed within an existing CCWD utility easement that contains an existing water pipeline. Within this utility ROW, the new 21-kV line could be within 50 feet of the closest homes on SR 4, Bixler Road, Kellogg Creek Road, and Hoffman Lane, potentially including Discovery Bay homes along SR 4.

Power Option 2 (Western & PG&E). Western would provide power to the new Delta Intake and Pump Station as described under Option 1. PG&E would provide power to the Expanded Transfer Facility through a new PG&E distribution substation constructed in the Los Vaqueros Watershed. This new substation would have the capacity to step power down from an existing 230-kV PG&E transmission line to a 21-kV powerline. The closest residence to the proposed substation would be over 1,500 feet to the north.

The approximately 1.5-mile-long, 21-kV distribution line would begin at the proposed 230-kV PG&E substation about 2,600 feet south of the intersection of Walnut Boulevard and Camino Diablo Road. It would follow an existing distribution line route west, cross Walnut Boulevard, and head north, paralleling Walnut Boulevard to the intersection of Camino Diablo Road. From there it would cross Walnut Boulevard and traverse east on the south side of Camino Diablo, cross Camino Diablo Road and traverse north on the west side of Longwell Avenue, and cross Kellogg Creek and traverse on the north side of an existing access road on the Expanded Transfer Facility property. The proposed 21-kV transmission lines would pass as close as 50-feet west of homes on Walnut Boulevard.

For the new electrical transmission facilities, EMF, measured under the lines and at the edge of the utility ROW, would vary, depending upon the configuration of the circuits and operation of the lines. Circuits placed parallel to each other tend to cancel EMF, thus reducing the measured fields under the lines and at the edge of the ROW. Fields and currents can be induced on nearby ungrounded fences, irrigation pipes, and other metallic objects.

4.13.2 Environmental Consequences

Methodology

Analysis of the potential for construction activities associated with the project to encounter subsurface hazardous materials was conducted by reviewing the land uses and databases that describe past hazardous materials releases in light of the proposed facility site locations. The discussion also addresses the potential for discovery of unreported hazardous materials releases.

Analysis of the project's potential to release hazardous materials was conducted by identifying the hazardous materials that would be used for the project, estimating the general quantity of such materials, and assessing the risk of a release. Impacts on emergency response/evacuation were analyzed by reviewing the relevant plans and identifying any conflict with these plans. Impacts on wildland fire risk were analyzed by comparing the state's fire risk maps to the project facilities site locations. Finally, potential for EMF effects associated with the proposed electrical transmission facilities is based on the distance of these facilities from schools.

Significance Criteria

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State California Environmental Quality Act (CEQA) Guidelines. These thresholds also encompass the factors taken into account under the National Environmental Policy Act (NEPA) to determine the significance of an action in terms of its context and the intensity of its effects. An alternative was determined to result in a significant effect on hazardous materials and public health if it would do any of the following:

- Expose construction workers to hazardous materials that would create health risks during construction
- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset or accident conditions involving their release into the environment
- Emit hazardous emissions or involve the handling of hazardous or acutely hazardous materials, substances, or waste within a quarter mile of an existing or proposed school (not analyzed in this section)
- Be on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code 65962.5
- Expose people or structures to a significant risk of loss, injury, or death from wildland fires
- Locate electrical transmission facilities less than 150 feet from the property line of an existing or approved school site
- Result in a safety hazard for people residing or working in a project area that is within 2 miles of a public airport or public-use airport (not analyzed in this section)
- Impair implementation of or physically interfere with Alameda County and/or Contra Costa County's emergency response and evacuation plans (not analyzed in this section)

No acutely hazardous materials would be used in project construction or operations, and none of the proposed project facilities where hazardous materials (such as fuels) might be used in operations, would be built within a quarter mile of an existing or proposed school. Therefore, this issue is not addressed further in this impact analysis.

The nearest airport to the proposed project facilities is the Byron Airport (a public airport), which is about 5 to 6 miles east of Los Vaqueros Reservoir and about 1 mile east of the proposed Transfer-Bethany Pipeline. Construction activities near the Byron Airport are discussed in Section 4.7 Land Use, under Impacts 4.7.3 and 4.7.4. Therefore, this issue is not addressed further in this impact analysis.

None of the project components would be constructed on a site that is included on any list of hazardous materials sites, including the list compiled pursuant to Government Code section 65962.5. Accordingly, the effects of construction on such a site are not discussed further in this section.

Most proposed project components are outside of road ROW or other evacuation routes and would not interfere with any emergency response plans or evacuation plans. The Reservoir Expansion/Dam Modification and recreation facilities are within the CCWD watershed. Outside of the watershed property, most of the facilities would be underground pipelines or structures on CCWD property (i.e., Delta Intake Facilities and Transfer Facility Expansion). Exceptions include Power Supply transmission poles and new substations. Because overhead powerlines are easily traversable by roads and the project components are relatively dispersed across the large project area and would not otherwise interfere with implementation of any emergency response plans or evacuation plans, this topic is not discussed further in this section. See also Section 4.9 Transportation and Circulation, Impact 4.9.2, for additional discussion of emergency vehicle access and Mitigation Measure 4.9.2, which addresses requirements of a project traffic control and safety assurance plan.

Impact Summary

Table 4.13-3 provides a summary of the impact analysis for issues related to hazardous materials/public health based on actions outlined in Chapter 3.

**TABLE 4.13-3
SUMMARY OF IMPACTS – HAZARDOUS MATERIALS / PUBLIC HEALTH**

Impact	Project Alternatives			
	Alternative 1	Alternative 2	Alternative 3	Alternative 4
4.13.1: Construction of the project and alternative components would disturb subsurface soils and groundwater; if hazardous substances are present in the disturbed areas, construction workers and the public could be exposed to these substances.	LS	LS	LS	LS
4.13.2: Project construction and operation could, through routine transport, use or disposal, accidentally release hazardous materials, thereby exposing construction workers, project personnel, and the public to hazardous materials, or accidentally releasing hazardous materials into the soil, groundwater, and/or a nearby surface water body.	LSM	LSM	LSM	LSM
4.13.3: Improper handling or use of flammable or combustible materials such as internal combustion equipment could result in wildland fires, exposing people or structures to a significant risk of loss, injury, or death.	LSM	LSM	LSM	LSM
4.13.4: Construction and operation of project power supply facilities would not locate electrical transmission facilities within 150 feet of a school.	NI	NI	NI	NI
4.13.5: The project alternatives would not contribute to cumulative impacts associated with release of hazardous materials or other hazards.	LS	LS	LS	LS

SU = Significant and Unavoidable
 LSM = Less-than-Significant Impact with Mitigation
 LS = Less-than-Significant Impact
 NI = No Impact

Impact Analysis

No Project / No Action Alternative

Under the No Project/No Action Alternative, no new facilities would be constructed. Therefore, this alternative would not result in any impacts on public health or safety related to hazards or hazardous materials.

Impact 4.13.1: Construction of the project and alternative components would disturb subsurface soils and groundwater; if hazardous substances are present in the disturbed areas, construction workers and the public could be exposed to these substances. (Less than Significant)

Alternative 1

The proposed areas of ground disturbance would be in rural and agricultural areas of eastern Contra Costa and Alameda Counties. None of the project components would be within the towns of Byron or Discovery Bay. Although most of the project area has not been used for commercial, industrial or other urban uses, and large portions are used as open grazing land, some of the project components could be in or near areas with a history of hazardous materials use. If areas of contamination were encountered, construction workers and potentially the public would be exposed to contaminated soil particulates and, potentially, to chemical vapors.

Reservoir Expansion and Recreational Facilities. Alternative 1 involves a 275 thousand acre-foot (TAF) Reservoir Expansion/Dam Modification with borrow areas, and recreation facilities constructed within CCWD watershed property lines. Review of available environmental regulatory databases for known current and historical sites of hazardous materials storage, generation, use, and/or disposal did not reveal any known sites within CCWD property, including any areas proposed for construction.

Delta Intake Facilities. Construction of a new Delta Intake and Pump Station would occur in an agricultural area apart from existing communities and other sensitive land uses. Review of available environmental regulatory databases for known current and historical sites of hazardous materials storage, generation, use, and/or disposal did not reveal any known sites near the proposed site of the new Delta Intake Facility.

Conveyance Facilities. Under Alternative 1, construction of three water conveyance pipelines and expansion of the existing Transfer Facility would occur. The Delta-Transfer Pipeline would lie along SR 4 within an existing transportation corridor. The Transfer Facility Expansion would occur on CCWD land next to the existing Transfer Facility. The Transfer-LV Pipeline alignment would also use an existing roadway corridor. The Transfer-Bethany Pipeline would pass south along Vasco Road and then over range land into Alameda County.

According to a review of environmental databases, the closest database site to any of the proposed project components is the Souza Ranch landfill at 6100 Armstrong Road, east of North Vasco Road. This landfill is about a quarter mile east of the proposed Transfer-Bethany Pipeline.

This permitted active facility disposes of sludge (biosolids) and has no reported violations or areas of concern. In and around the Byron Airport, there are other similar landspreading facilities, including the Byron Hot Springs Landspreading and the Airport Ranch Sludge Spreading facilities. Byron Hot Springs Landspreading is at 5400 Byron Hot Springs Road, which is about 1.5 miles east of the proposed Transfer-Bethany Pipeline. The Airport Ranch Sludge Spreading facility is at Holey Road, almost adjacent to the Byron Airport and about 2 miles east of the proposed Transfer-Bethany Pipeline. However, there are no reported violations or areas of concern for any of these facilities, which are, in any event, at distances that would be unlikely to affect construction activities associated with the proposed project.

There are also no reported spills or leaks associated with the other nearby sites, such as the service station at Bixler Road and SR 4, the boat storage yard, and the Unimin sand plant. Based on the lack of any identified release associated with these facilities, their potential to affect humans at the proposed project elements is considered very low.

Power Supply. To accommodate a new Delta Intake and Pump Station as well as the expansion of the Transfer Facility, additional overhead electrical powerlines and a substation would be required. Two options for electrical facilities currently under consideration include Power Options 1 and 2. Construction of Power Option 1 includes a new powerline from the Western substation to the new Delta Intake facilities, with a new Western substation at the eastern terminus of Camino Diablo Road. Power Option 2 would entail a new PG&E substation within the CCWD watershed property in an area to the north of the staging area, plus a new distribution line connecting the new PG&E substation to the expanded Transfer Facility. Review of available environmental regulatory databases for known current and historical sites of hazardous materials storage, generation, use, and/or disposal did not reveal any known sites within a mile of the power supply facilities.

Unforeseen Hazardous Conditions. Existing federal, state and local worker safety and emergency response regulations (see subsection 4.13.1) require that if any unforeseen hazardous conditions are discovered during construction, the contractor coordinate with the appropriate agencies for the safe handling, sampling, transportation, and disposal of encountered materials. Alameda and Contra Costa counties have adopted County Hazardous Materials Area Plans (for their respective jurisdictions) that outline the procedures that county regulatory and response agencies will use to coordinate management, monitoring, containment, and removal of hazardous materials in the event of an accidental release (Contra Costa County, 1996). The contractor would also be required to comply with Cal-OSHA worker health and safety standards that ensure safe workplaces and work practices. The impacts of Alternative 1 would be less than significant.

Alternative 2

The facilities included in Alternative 2 would be the same as those under Alternative 1. Therefore, the impacts of Alternative 2 would be less than significant.

Alternative 3

Construction of Alternative 3 would include the same components as Alternative 1, except that expansion of the Old River Intake and Pump Station would occur within the facility's existing site area and Alternative 3 would not include a new Delta Intake and Pump Station or the Transfer-Bethany Pipeline. As such, no database sites are identified at or next to Alternative 3 project components. As with Alternatives 1 and 2, the impacts of Alternative 3 would be less than significant.

Alternative 4

Alternative 4 would involve a 160-TAF Reservoir Expansion/Dam Modification with two borrow areas and recreational facilities to be constructed within CCWD watershed property lines. Under this alternative, the existing Transfer Facility would be upgraded; but this facility would not expand its footprint as would occur for other alternatives.

Alternative 4 would exclude construction of any Delta Intake and Pump Station, Conveyance or Power Supply facilities, and would avoid ground disturbance in areas with hazardous materials. As with Alternatives 1, 2, and 3, the impacts of Alternative 4 would be less than significant.

Mitigation: None required.

Impact 4.13.2: Project construction and operation could, through routine transport, use or disposal, accidentally release hazardous materials, thereby exposing construction workers, project personnel, and the public to hazardous materials, or accidentally releasing hazardous materials into the soil, groundwater, and/or a nearby surface water body. (Less than Significant with Mitigation)

Alternative 1

Under Alternative 1, there would be construction and operation activities that would require use of limited quantities of hazardous materials such as fuels, oils, grease, lubricants, and glues. The improper use, storage, handling, or disposal of hazardous materials could allow hazardous releases from equipment or through other means during project construction or operation activities, thereby exposing construction workers and CCWD personnel to hazardous materials. There could also be accidental or intentional acts of destruction, including releases of hazardous materials that would contaminate soil or degrade water quality. The types and quantities of hazardous materials would vary throughout construction of the project but would likely involve minor quantities (less than 5 gallons) of miscellaneous substances (e.g., paint and solvents) at each work area and explosives at the borrow area.

The primary hazardous materials handled would be fuel, hydraulic fluid, and engine oil in quantities that would likely be in the range of hundreds of gallons over the course of construction. The most likely area for potential release of fuel, hydraulic fluid, oil, and other substances would be

around the mechanics' yard. All hazardous materials would be contained and stored according to the manufacturer's recommendations and hazardous material storage requirements.

For construction of the Reservoir Expansion project and other stationary facilities, refueling the construction equipment could occur in one location on the construction site and, if access allows, the refueling vehicle may also be taken out to a piece of equipment. Routine maintenance and refueling would occur in available parking areas and major maintenance in the CCWD watershed mechanics yard. For the construction of pipelines, power poles, and other facilities that traverse the project area, the contractor will use a fuel vehicle to refuel construction equipment in a manner that protects water quality, as restricted under Mitigation Measure 4.5.1a. Regulatory compliance procedures would be in place to contain spillage during refueling and other maintenance.

For facility operations after construction is completed, CCWD would be required to update its existing permits and comply with appropriate regulations. For the purposes of maintenance during operations, the project would continue to handle and store limited quantities of hazardous materials such as paints, solvents, fuels, and oil, but in far smaller quantities than during construction. CCWD would update its existing *Emergency Response Plan and Hazardous Materials Business Plan*, which would state quantities stored and provide handling procedures to ensure the safety of workers and the public.

Due to the extent and duration of construction and the common use of hazardous materials such as fuels, oils, grease, lubricants, and glues during construction, Alternative 1 has the potential to expose people and the environment to accidental releases of hazardous substances, resulting in a significant impact.

Alternative 2

The facilities and construction procedures included in Alternative 2 would be the same as those in Alternative 1. Therefore, this alternative also has the potential to expose people and the environment to accidental releases of hazardous substances, resulting in a significant impact.

Alternative 3

Construction of Alternative 3 would include the same components and construction procedures as Alternative 1, except that expansion of the Old River Intake and Pump Station would occur within that facility's existing site area, and Alternative 3 would not include a new Delta Intake and Pump Station or the Transfer-Bethany Pipeline. As with Alternative 1, Alternative 3 has the potential to result in exposing people and the environment to an accidental release of hazardous substance, resulting in a significant impact.

Alternative 4

Alternative 4 would involve a 160-TAF Reservoir Expansion/Dam Modification project with two borrow areas and recreational facilities to be constructed within CCWD watershed property lines. Under this alternative, the existing Transfer Facility capacity would be upgraded; however, this

facility would not expand its footprint as would occur for the other alternatives. Alternative 4 would exclude construction of any Delta Intake and Pump Station, Conveyance, or Power Supply facilities and would avoid ground disturbance in areas with hazardous materials. Alternative 4 involves a smaller project that would require less time to complete construction. The same construction procedures would be in place, however, to prevent hazardous material spills. Alternative 4, like Alternative 1, could result in exposing people and the environment to accidental releases of hazardous substances; however, based on the overall reduction in construction time and equipment necessary, the potential impact would be reduced. This would be a significant impact.

Mitigation Measures

Implementation of Mitigation Hydrology Measures 4.5.1a and 4.5.1b: These measures involve protection of water quality.

Measure 4.13.2: CCWD will incorporate into the contract specifications that require the contractor to enforce strict onsite best management practices (BMPs) to keep hazardous materials from accidental release. These practices will include, without limitation, designating a central storage area to keep hazardous materials away from any waterways and storm drain inlets; refueling equipment in designated areas; containing contaminants away from any waterways or storm drain inlets; preparing a spill prevention, control, and countermeasure plan; and regularly inspecting construction vehicles for leaks.

Impact Significance after Mitigation: Less than Significant.

Impact 4.13.3: Improper handling or use of flammable or combustible materials such as internal combustion equipment could result in wildland fires, exposing people or structures to a significant risk of loss, injury, or death. (Less than Significant with Mitigation)

Alternative 1

The rural areas of Contra Costa and Alameda Counties in which the proposed project would be constructed are dominated by grasslands, shrublands, and woodlands. The relatively dry climate conditions make the fire regime rich with fuels, although areas with active grazing, agricultural irrigation, and landscape irrigation provide some fuel reduction. Wildland fires in this region are largely caused by human activities as opposed to lightning-ignited fires. The most likely source of an ignition from the proposed project would be from construction and construction-related activities, such as welding, re-fueling, or use of other fuel-motorized equipment.

As previously discussed in the Environmental Setting section, the proposed project elements of Alternative 1 lie partially within an a Wildland Area That May Contain Substantial Forest Fire Risks and Hazards (CDF, 2000). The majority of the open space west of the Byron Highway/railroad tracks is mapped as a hazard area. Affected conveyance facilities include the western portion of the Delta-Transfer Pipeline; Transfer Facility Expansion; Transfer-LV Pipeline; and the western portion of the Transfer-Bethany Pipeline. Power Option 2, with a potential

new PG&E substation, would also be in the identified wildland fire hazard area as would the recreation facilities. As such, construction activities would be required to adhere to fire safety measures that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided onsite for various types of work in fire-prone areas.

Due to the extent and duration of project construction as well as activities such as welding, re-fueling, and use of fuel-motorized equipment, Alternative 1 has the potential to expose people and structures to wildland fires. This impact would be significant.

Alternative 2

The facilities and construction procedures included in Alternative 2 would be the same as those in Alternative 1. Therefore, this alternative has the potential to expose people and structures to wildland fires. This impact would be significant.

Alternative 3

Construction of Alternative 3 would include the same components and construction procedures as Alternative 1, except that expansion of the Old River Intake and Pump Station would occur within that facility's existing site area and Alternative 3 would not include a new Delta Intake and Pump Station or the Transfer-Bethany Pipeline. As with Alternative 1, Alternative 3 has the potential to expose people and structures to wildland fires. This impact would be significant.

Alternative 4

Alternative 4 would involve a 160-TAF Reservoir Expansion/Dam Modification project, with two borrow areas and recreational facilities to be constructed within CCWD watershed property lines. Under this alternative, the existing Transfer Station capacity would be expanded; however, this facility would not expand its footprint as would occur for other alternatives. Alternative 4 would exclude construction of any Delta Intake and Pump Station, Conveyance or Power Supply facilities, and would avoid ground disturbance in areas with hazardous materials. Alternative 4 involves a smaller project that would require less time to construct and cover an overall smaller footprint. However, as with Alternative 1, this alternative has the potential to expose people and structures to wildland fires. This impact would be significant.

Implementation of Mitigation Measure 4.13.3 would reduce the potential for wildfire risks to less-than-significant levels.

Mitigation Measures

Measure 4.13.3: CCWD will incorporate into contract specifications the requirement that the contractor enforce strict onsite BMPs to reduce the potential for accidental fires.

- 1) All equipment used during construction must have an approved spark arrestor.

- 2) The contractor/staff responsible for construction will submit a Fire Safety Plan for review by the Contra Costa County Fire Prevention Bureau. This plan will include precautions to carry out during high-fire danger, a list of fire-suppression equipment and tools to have on hand, a description of available communications, specifications for the supply of water to have on hand, and descriptions of other actions that will reduce the risk of ignition and facilitate immediate control of an incipient fire.
- 3) Ensuring easily accessible fire-suppression equipment is available at all work locations.

Impact Significance after Mitigation: Less than Significant.

Impact 4.13.4: Construction and operation of project power supply facilities would not locate electrical transmission facilities within 150 feet of a school. (No Impact)

Alternative 1

New transmission lines and other power facilities would be constructed as part of the Los Vaqueros Reservoir Expansion Project; therefore, EMF levels would increase and there would be some potential for increased exposure by people and the environment to EMF.

However, as indicated in Section 4.13.1, Affected Environment, there are no federal or state regulations governing EMF except near schools and no regulations have established environmental limits on the strengths of fields from powerlines. The State of California Department of Education regulations require minimum distances between a new school and the edge of a transmission line ROW. The setback distances are 150 feet from the edge of the transmission line ROW for 230-kV lines, which are the largest lines associated with the project. Since none of the project components would be within a quarter mile of an existing or proposed school, this criterion would be met and there would be no impacts related to EMF.

Alternative 2

Power Options 1 and 2 facilities and construction procedures that are included in Alternative 2 would be the same as those under Alternative 1. Impacts related to EMF would be no impact.

Alternative 3

Construction of Alternative 3 would include the same components and construction procedures as Alternative 1 except that the Old River Intake and Pump Station would be expanded and there would be no construction of the new Delta Intake and Pump Station or the Transfer-Bethany Pipeline. As with Alternative 1, no new facilities would be within 150 feet of an existing or proposed school. Impacts related to EMF would be no impact.

Alternative 4

Alternative 4 would involve a 160-TAF Reservoir Expansion/Dam Modification project with two borrow areas and multiple recreational facilities to be constructed within CCWD watershed property lines. Under Alternative 4, there would not be any new power supply facilities constructed and, therefore, there would be no impacts related to EMF.

Mitigation: None required.

Cumulative Effects

Impact 4.13.5: The project alternatives would not contribute to cumulative impacts associated with release of hazardous materials or other hazards. (Less than Significant)

Construction of the project under all alternatives would disturb subsurface soils and groundwater during site preparation and building of reservoir facilities, excavation for pipelines and other construction activities (Impact 4.13.1). If contaminated soils or hazardous substances were present in the disturbed areas, construction workers and the public could be exposed to these substances; however, there is no recorded indication that contaminated sites or hazardous substances are within areas to be disturbed. Therefore, there would be limited opportunity for the project alternatives to contribute to cumulative impacts associated with exposure to hazardous materials.

Most construction projects, like the proposed Los Vaqueros Reservoir Expansion project, would involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Most potential hazards and hazardous materials impacts associated with the storage, use, disposal, and transport of materials are extensively regulated by various federal, state and local agencies. Accidental spill or contamination impacts (Impact 4.13.2) would be focused at individual facility locations and construction activities would be required to implement BMPs to keep hazardous materials from being accidentally released (Mitigation Measure 4.13.2).

In the same manner as other hazardous materials, use of flammable and combustible materials (such as internal combustion equipment) is extensively regulated by various federal, state and local agencies to reduce chances of starting wildland fires (Impact 4.13.3). Contract specifications that require the contractor to enforce strict onsite BMPs would be placed specifically at individual facility locations and construction activities to reduce the potential for accidental fires (Mitigation Measure 4.13.3).

As for the potential for the project alternatives to contribute to cumulative impacts associated with EMF (Impact 4.13.4), it is recognized by the CPUC that EMF fields from power supply facilities drop to near background levels in relatively short distances. Construction and operation of project power supply facilities would not locate electrical transmission facilities near any schools; therefore, there would be no opportunity for the project alternatives to contribute to cumulative impacts associated with exposure to EMF.

The proposed project would not make a cumulatively considerable contribution to any significant cumulative impact related to hazardous materials or public health due to the site-specific nature of the potential impacts and the required implementation of BMPs to avoid accidental hazardous material spills and wildland fires. Cumulative impacts would be less than significant.

Mitigation: None required.
