

## 24.0 Summary Comparison of Alternatives

A summary comparison of a number of important hazards-related impacts is provided in Figure 24-0. This figure provides information on the magnitude of adverse impacts related to hazards and hazardous materials that are expected to result from all alternatives.

As depicted in Figure 24-0, each action alternative would lie within 0.5 mile of sites of concern for hazards and hazardous materials. Alternatives 1B, 1C, 2B, 2C, 6B, and 6C, would have the greatest potential to conflict with a known hazardous materials site and, as a result, create a significant hazard to the public or environment, because those alternatives would be implemented within 0.5 mile of nine sites of concern. Alternatives 4, 2D, 4A, and 5A would have the least potential to conflict with known hazardous sites because those alternatives would be implemented within 0.5 mile of only three sites of concern.

Table ES-8 in the Executive Summary provides a summary of all impacts disclosed in this chapter.

## 24.1 Environmental Setting/Affected Environment

### 24.1.1 Potential Environmental Effects Area

This section discusses the hazards and hazardous materials study area (the area in which impacts may occur) which consists of the Plan Area (the area covered by the action alternatives), which is largely formed by the statutory borders of the Delta, along with areas in Suisun Marsh and the Yolo Bypass; and Areas of Additional Analysis.

The study area is primarily an inland delta, and consists of lowlands and wetlands formed by the confluence of the Sacramento and San Joaquin Rivers and other tributaries. Surficial sediments, described in Chapter 9, *Geology and Seismicity*, are generally Quaternary-age, with older sediments extending to depths of at least 9,000 feet. These deeper sedimentary units contain petroleum reserves, and oil and natural gas are produced (analyzed further in Chapter 26, *Mineral Resources*).

The Delta is characterized as a multi-use landscape, with agriculture accounting for approximately 75% of land use within the study area. Other land uses include industrial/manufacturing, transportation, recreation, habitat conservation, and residential, as described in Chapter 13, *Land Use*. The built environment of the study area contains a variety of roads, transportation facilities, waterways and canals, utilities, petroleum production and processing facilities, urban lands, and other structures. As described in Chapter 19, *Transportation*, the study area is home to several major transportation arteries, such as Interstate (I-) 5 and other highways in the region. Shipping centers include the Ports of Sacramento and Stockton, and several national and regional railroads operate within the study area.

A discussion of historical and existing land uses with the potential to result in hazardous conditions is provided in Section 24.12, *Potential Hazardous Materials in the Study Area*.

1 The Delta contains rich wetlands, fertile soil, and an abundant variety of plant and animal life. The  
 2 availability of fresh water and arable land has resulted in most of the Delta's conversion to farm  
 3 land. The study area's hydrologic characteristics are typical of lowlands with shallow groundwater  
 4 and a system of gaining and losing streams. A detailed description of the study area's hydrogeologic  
 5 setting is provided in Chapter 7, *Groundwater*.

## 6 **24.1.2 Potential Hazardous Materials in the Study Area**

7 This section describes naturally occurring and anthropogenic hazards in the study area. Historic  
 8 agricultural, industrial and urban/recreational activities in the study area and, in some cases,  
 9 upstream of the study area, have resulted in the presence of hazardous materials in soils, sediments,  
 10 and groundwater in the study area. Additionally, current agricultural, industrial, urban, and  
 11 recreational activities (e.g., boating) within the study area use and introduce hazardous materials  
 12 (e.g., pesticides, fertilizers, industrial waste). Further, infrastructure, such as crude oil and natural  
 13 gas pipelines, is present throughout the study area. These materials have the potential to be released  
 14 into the environment during the construction and operational phases of the proposed alternatives.  
 15 Specific types of hazards and hazardous materials are discussed in greater detail below.

### 16 **24.1.2.1 Naturally Occurring Hazards**

17 Historic geologic conditions in the study area have led to the formation of peat and other organic  
 18 soils with thicknesses of up to approximately 55 feet on the western side of the Delta; peat deposits  
 19 are not commonly found on the eastern side. The thick organic soils and peat have the potential to  
 20 generate flammable gases such as methane that can pose hazards to workers during deep  
 21 excavations and tunneling. In addition, petroleum deposits underlying the study area could result in  
 22 the migration of oil and/or natural gas from deep reservoirs into shallow strata that may be  
 23 disturbed during construction. Additional information on organic soils and oil and gas deposits in  
 24 the study area are provided in Chapter 9, *Geology and Seismicity*; Chapter 10, *Soils*; and Chapter 26,  
 25 *Mineral Resources*.

26 Much of the study area consists of lowlands capable of supporting insects such as mosquitos, which  
 27 can be vectors for infectious diseases. The potential hazards associated with vector-borne diseases  
 28 are discussed in Chapter 25, *Public Health*.

### 29 **24.1.2.2 Hazards from Agricultural Practices**

30 Agriculture has been the primary land use in the study area for more than a century. As described in  
 31 Chapter 13, *Land Use*, approximately 538,000 acres of the 738,000 acres of the study area are used  
 32 for agriculture.

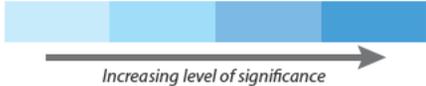
33 A wide variety of pesticides, including insecticides, herbicides, and fungicides, have been used  
 34 throughout the study area for decades, and may be present in and near agricultural lands. Table  
 35 24-1 provides an evaluation of the pesticides used most prevalently in 1974 and 2008 and the crops  
 36 with which they were associated. While some pesticides that were used in 1974 were still in use in  
 37 2008 (e.g., sulfur, petroleum oils, 1,3-dichloropropene, diuron, and carbaryl), a number of new  
 38 pesticides, such as chloropicrin, chlorpyrifos and propanil, are available and in use currently.  
 39 Notably, a number of pesticides prevalently used in the 1970s are no longer prevalently used:  
 40 dinoseb, chlordane, dibromochloropropane (DBCP), ethylene dibromide, parathion, and toxaphene.

Chapter 24 – Hazards and Hazardous Materials	Alternative																			
	Existing Condition	No Action	1A	1B	1C	2A	2B	2C	3	4	5	6A	6B	6C	7	8	9	4A	2D	5A
HAZ-3: Potential to conflict with a known hazardous materials site and, as a result, create a significant hazard to the public or environment (Number of sites of concern within 0.5 miles of conveyance alignment)	n/a	n/a	4	9	9	4	9	9	4	3	4	4	9	9	4	4	4	3	3	3
	n/a	LTS/NA	NI/NE	LTS/NA	LTS/NA	NI/NE	LTS/NA	LTS/NA	NI/NE	NI/NE	NI/NE	NI/NE	LTS/NA	LTS/NA	NI/NE	NI/NE	LTS/NA	NI/NE	NI/NE	NI/NE

**Key**

Level of significance or effect **before** mitigation  
(Quantity of impact: number of sites, structures, acres, etc. affected)



Increasing level of significance

n/a not applicable  
> greater than  
< less than  
≈ about equal to

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Level of significance or effect **after** mitigation  
(CEQA Finding / NEPA Finding)

<b>CEQA Finding</b>	<b>NEPA Finding</b>
NI No Impact	B Beneficial
LTS Less than significant	NE No Effect
S Significant	NA Not Adverse
SU Significant and unavoidable	A Adverse

00139\_14 EIR-EIS Ex. Summ. 1-20-2016 (tm)

**Figure 24-0**  
**Comparison of Impacts on Hazards and Hazardous Materials**

1

**Table 24-1. Pesticides and Crop Associations in 1974 and 2008**

Pesticide/Crop	Grains (Wheat, Rice, Corn, Barley, Oat)	Hay	Fruit Trees	Grapes	Other Fruits	Nuts	Beans (Dry)	Vegetables	Pasture and Rangeland	Seed Crops
1,3 Dichloropropene			●	❖		●		●		
2,4-D, all formulations	●	❖	●		❖	●		●	●	
Azinphos-methyl			□			□		□		
Captafol	❖		❖			❖		❖		
Carbaryl	●	❖	●	□	□	●		●	❖	
Chlordane, all formulations	❖		❖	❖	❖		❖	❖		
Chloropicrin			□		□	□		□		
Chlorpyrifos	□	□	□			□		□		□
Copper, inorganic and organic complexes	●	●	●	●	●	●	❖	●	❖	
DBCP, all formulations	❖	❖	❖	❖		❖	❖	❖		
Dicofol	❖	❖	●	●	❖	●	●	❖		
Dinoseb, all	❖	❖		❖	❖		❖	❖		
Diuron	□	●	□	□		●			●	
Endosulfan	●		❖	❖	❖			●		
Ethylene dibromide					❖			❖		
Glyphosate, all complexes	□	□	□	□	□	□	□	□	□	□
Kaolin			□		□	□		□		
Lime-sulfur			●	●		●				
Malathion	●	❖	❖		●	●	❖	●	❖	
Mancozeb			□		□			□		
Metam-sodium	□			□				□		□
Methomyl	□	□		●	●			●		
Methyl bromide	●		●			●	●	●		
Mineral Oil			●	●		●		❖		
Molinate	●									
Oryzalin			□	□		□				
Oxyfluorfen	□	□		□		□	□	□		
Paraquat dichloride	●		●	●	●	●		●		●
Parathion	❖	❖	❖	●	❖	❖	❖	❖	❖	
Pendimethanlin		□	□			□	□	□		
Petroleum oils, all	●	●	●	❖	●	●	❖	●		●
Potassium n-methyldithiocarbamate					□			□		
Propanil	□									
Propargite	□	□		□		□	□			
Propylene oxide						□				
S-Metolachlor	□	□					□	□		□
Sulfur	●		●	●	❖	●	❖	●		
Sulfuryl fluoride	●					●				
Toxaphene	❖	❖	❖		❖		❖	❖		
Trifluralin	□		□			□	□	□		□
Xylene	❖	❖	❖	●	❖	●	❖	●	❖	

Source: California Department of Pesticide Regulation 2010.

- ❖ = indicates use in 1974.
- = indicates use in 2008 only.
- = indicates use in both years.

1 The wide variety of pesticides that has been applied, the numerous crops grown in the region, and  
2 the fact that predominant land use across the Delta supports agriculture indicate that pesticides and  
3 their residues are likely to be found in the soils throughout the Delta. While organochlorines,  
4 arsenates, and mercury compounds are the most persistent, chemicals that have been widely and  
5 historically applied (e.g., DBCP) may also continue to persist within the soils. Because of their  
6 relatively low water solubility, persistent pesticides and compounds generally accumulate in the  
7 environment in sediment and soil, as well as in the fatty tissue of terrestrial and aquatic animals and  
8 humans. Human exposure to organochlorine pesticides is primarily through diet consisting of fatty  
9 foods, such as meat, fish, poultry, and dairy products. Studies have indicated that organochlorine  
10 pesticides are endocrine disruptors, neurotoxicants, and carcinogens (Verreault et al. 2004; Sagiv et  
11 al. 2010; Kleanthi et al. 2008). Arsenic is also found in certain pesticides, fertilizers, and feed  
12 additives used in commercial agricultural operations (Saracino-Kirby 2000; U.S. Environmental  
13 Protection Agency 2009). The effects of exposure to any hazardous substance depend on many  
14 variables, including the dose, duration and route of exposure.

15 No comprehensive area-wide soil or sediment sampling program is known to have been conducted  
16 to evaluate pesticide residues from agricultural use. Further discussion of the fate, transport, and  
17 bioaccumulative properties of pyrethroid, organochlorine, and organophosphate pesticides that  
18 have been applied to study area crops is provided in Chapter 8, *Water Quality*.

19 Pesticide and fertilizer supply companies, including facilities that sell, store, concentrate, dilute, or  
20 distribute agricultural chemicals, are present throughout the Delta. These facilities may be large-  
21 volume supply businesses that have large tanks with thousands of gallons of these agricultural  
22 chemicals, which are sold to farmers or distributors for local use. These facilities may also be farm-  
23 level batch plants, which take the raw material from a supply yard or tanker and temporarily store  
24 the material prior to loading into distribution equipment. The main difference between a supply  
25 business and a batch plant is the volume and duration of storage. Another important distinction is  
26 that supply businesses often have extensive spill-containment equipment and specially trained staff.  
27 A batching operation is often less sophisticated regarding spill containment. A farmer may or may  
28 not have specific training for handling these chemicals.

29 In addition to the activities in the agriculture environs that generate hazards from pesticides,  
30 herbicides and fertilizers, there are, other activities associated with farming that can generate  
31 hazardous materials. Most farming properties have land that is not engaged directly in crop  
32 production. These areas may contain a barn formerly used for working animals but more commonly  
33 used now for equipment storage and maintenance. These areas often contain both aboveground and  
34 underground storage tanks (AST, UST) for various materials used in the operations of the farm. In  
35 addition to the pesticides, herbicides, and fertilizers discussed previously, storage of petrochemical  
36 products is prevalent. Farms also have a waste disposal area, where waste crop material may be  
37 stored for later offsite disposal, composting, or final disposal. These areas often contain drums of  
38 lubricants, agricultural chemicals, or any other item that a farmer might wish to discard.

39 Most farms also have an area where their product is either stored or processed onsite prior to offsite  
40 shipping for consumptive use. The study area has a wide variety of processing facilities related to  
41 the variety of crops grown there (e.g., pears and asparagus). Contaminants of concern for these  
42 types of properties vary, but are primarily limited to pesticides, herbicides, fertilizers, and chemicals  
43 for maintaining farm equipment (e.g., solvents, grease, oil, gasoline). The waste disposal areas may  
44 have petroleum products (e.g., waste materials from equipment maintenance) or agricultural  
45 chemicals (spillage from containers containing residual volumes of chemicals such as pesticides).

1 Health studies of petroleum products have shown effects on lungs, the central nervous system, the  
2 immune system, reproduction, skin, and eyes (Agency for Toxic Substances and Disease Registry  
3 1999). The effects of exposure to any hazardous substance depend on many variables, including the  
4 dose, duration and route of exposure.

### 5 **24.1.2.3 Hazards from Oil and Gas Production and Processing**

6 Active oil and gas extraction fields are present throughout the Delta. Petroleum production  
7 throughout the study area mainly consists of natural gas extraction, though minor quantities of  
8 crude oil and condensate are also produced.

9 Petroleum production has occurred in the study area at least since the discovery of the Rio Vista gas  
10 field in 1936. Approximately 3,400 oil and gas wells have been drilled throughout the study area;  
11 many of these wells are present along the proposed water conveyance facilities alignments under  
12 consideration for the action alternatives (Department of Conservation 2010). Oil and natural gas  
13 production emits benzene, toluene, ethylbenzene, and xylenes (BTEX compounds) as well as n-  
14 hexane and other volatile organic compounds. Exposure to these compounds in the short-term can  
15 result in nose, throat, eye, skin and gastric irritation, nausea, vomiting and neurological effects.  
16 Chronic exposure can result in blood disorders, birth defects, developmental disorders, neurological  
17 effects, respiratory problems, and cancer (U.S. Environmental Protection Agency 2011a). The  
18 locations of active wells can be determined with relative ease; however, older oil and gas wells may  
19 have been abandoned or shut-in without highly detailed location data. Chapter 26, *Mineral*  
20 *Resources*, provides the locations of known oil and gas wells drilled throughout the study area.

21 Petroleum processing facilities include a wide range of facilities and equipment that generally fall  
22 into two categories: in-field facilities and pipeline/transport facilities. In-field facilities enhance  
23 petroleum and gas extraction and distribution (or storage) prior to linkage to larger regional  
24 pipelines. In-field facilities contain equipment that may be used for a specific well or set of wells, or  
25 may include sub-regional or regional facilities that service a wide area. Pipeline/transport facilities  
26 contain pump stations, pressure regulation equipment, or storage tanks used to facilitate the orderly  
27 feed of petroleum gathered from individual wells into a larger pipeline for transport to a refinery.

28 Historic oil and gas well fields may include areas that may have contaminated soil and/or  
29 groundwater. In addition to production facilities, an active producing well field may have areas used  
30 during exploration that may result in soil or groundwater contamination. For example, during  
31 typical drilling activities, mud pits have served as surface impoundments for drilling fluids that can  
32 contain hazardous materials (e.g., cadmium, mercury, chromium, naphthalene, and fluorine),  
33 resulting in a potential source of contamination. Drilling fluids often contain petroleum compounds  
34 in both raw (crude) form and refined form (drilling enhancement additives). Generally, mud pits are  
35 a series of open tanks, usually made of steel plates, through which the drilling mud is cycled to allow  
36 sand and sediments to settle out. Former mud pits, although usually lined, may be a historic source  
37 for hydrocarbon contamination.

38 Other oil and gas exploration and production activities that can release hazardous materials into the  
39 environment where they may be encountered during excavation or construction include drilling,  
40 production, treatment and temporary storage areas, piping to gathering points, and storage and  
41 shipment to refineries and processing facilities. Petroleum facilities include pump stations, pressure  
42 regulation equipment, or storage tanks used to facilitate the orderly feed of petroleum gathered  
43 from individual wells into a larger pipeline for transport to a refinery. Figure 24-1 displays the

1 locations of known oil and gas processing facilities in the study area for which sufficient data were  
2 available.

3 Additionally, active, abandoned, and shut-in oil and gas wells may be present in areas where  
4 excavation is planned. Improperly sealed natural gas wells have the potential to act as natural gas  
5 conduits from deep reservoirs to shallow strata where flammable gases may pose hazards to  
6 excavation or tunneling activities. The locations of many abandoned or shut-in wells may be  
7 unknown due to inadequate or missing data or poor record-keeping.

#### 8 **24.1.2.4 Hazards from Historical Mercury Mining**

9 Mercury has been identified as a chemical of concern in Delta area sediments, resulting from gold  
10 and mercury mining operations in the watersheds upstream of the Delta. Mercury was used  
11 extensively upstream of the study area in mining to extract gold from ores and placer gravel  
12 deposits. Mercury released into the environment by historic gold mining practices has been flowing  
13 into the study area via water, primarily from the Sacramento River watershed, and sediments since  
14 the mid-1800s and is expected to continue to enter the study area. An unknown amount of mercury  
15 is present in sediments within the study area, but estimates of mercury flowing into the study area,  
16 mainly associated with suspended sediment (Alpers et al. 2008:10), range from approximately 200–  
17 400 kg/yr (Central Valley Regional Water Quality Control Board 2008:116). A discussion of mercury  
18 and other metals and their bioaccumulative properties is provided in Chapter 8, *Water Quality*, and  
19 Chapter 25, *Public Health*.

#### 20 **24.1.2.5 Urban, Residential, and Recreational Land Use**

21 In general, hazardous materials releases from cities and towns are associated with stormwater  
22 runoff and primarily affect water bodies. Cities and towns account for approximately 9% of the total  
23 study area. Urban stormwater discharges are generally characterized by varying levels of metals and  
24 hydrocarbons that can accumulate in river sediments over time. Historically, polychlorinated  
25 biphenyls (PCBs) have been associated with urban discharge, and these contaminants have been  
26 detected in fish tissues in San Francisco Bay.

27 Urban areas have many facilities with the potential for hazardous materials releases, including gas  
28 stations, dry cleaners, automotive repair facilities, and, in larger towns, manufacturing facilities.  
29 Stockton, for example, has large shipping and port facilities, as well as federal facilities with a history  
30 of hazardous materials use, storage, and releases. Antioch and Oakley, located on the south side of  
31 the San Joaquin River in the southern end of the study area, have major power-producing facilities  
32 and several active or former industrial facilities with known groundwater impacts. Possible  
33 contaminants of concern from urban land uses are extensive, but the most common contaminants in  
34 soil and groundwater are petroleum and associated compounds (typically gasoline and diesel  
35 releases from USTs as the source), chlorinated solvents and degreasers (from dry cleaning and  
36 vehicle repair facilities), and various heavy metals, such as arsenic and lead. The variety of  
37 contaminants that can exist in groundwater beneath urban land uses depends on the sources and on  
38 the geologic conditions present that might accelerate or limit dispersion of contaminants in soil and  
39 groundwater media. Wastewater discharges from treatment plants also are associated with urban  
40 and suburban land use. A detailed discussion of water quality is provided in Chapter 8, *Water*  
41 *Quality*. Given the small percentage of urban land in the study area, urban-related toxicants are of  
42 less concern than other potential sources of hazardous materials.

1 In addition, large marinas, service houseboats, pleasure craft, and commercial craft are present  
 2 throughout the study area. Marinas typically include bulk fuel storage and overwater fueling,  
 3 various boat repair/maintenance facilities, stores, boat storage, and camping facilities. Typical  
 4 chemicals associated with marinas include fuels, lubricants, cleaners, anti-fouling paints, and  
 5 fiberglass components.

### 6 **24.1.2.6 Hazardous Materials Transportation**

7 The study area and surrounding region are home to important urban centers, including the cities of  
 8 Antioch, Stockton, Sacramento, and San Francisco. Major east-west surface transport routes and ship  
 9 channels cross the Delta. These transportation corridors move a variety of products, including  
 10 hazardous materials. Transportation of hazardous materials involves some risk of spillage and  
 11 subsequent contamination of soil, water, or sediments.

12 Hazardous materials transported through the study area include a variety of commodities. However,  
 13 detailed information is not available due to security and proprietary reasons. Attempts to obtain  
 14 detailed information were met with non-disclosure responses, presumably due to proprietary and  
 15 security concerns. In the wake of the terrorist attacks of September 11, 2001, the Department of  
 16 Transportation's (DOT) Research and Special Programs Administration (RSPA), which has  
 17 regulatory authority over all modes of hazardous materials transportation, published the HM-232  
 18 final rule on March 25, 2003. Codified at 49 Code of Federal Regulations (CFR) Part 172, HM-232  
 19 requires entities that transport certain types and quantities of hazardous materials to develop and  
 20 implement security plans (Batelle and TotalSecurity.US n.d.). "En route" security is one of three  
 21 required sections of security plans, specified in Section 172.802. Security plans are considered  
 22 "security sensitive information," available only on a "need to know" basis to those with relevant  
 23 responsibilities or appropriate security clearance (Batelle and TotalSecurity.US n.d.: 31; 49 CFR 172,  
 24 Part 172.802[c]). While non-disclosure of information concerning materials and routes is not a  
 25 specific requirement of HM-232, it is a common feature of security plans (Coleman pers. comm.).

26 Information provided in this section on the types of hazardous materials transported is therefore  
 27 limited to publicly available information.

28 Assuming hazardous materials transportation corresponds reasonably with overall freight flows,  
 29 hazardous materials move by water, pipeline, rail, and road through the Delta. The hazardous  
 30 materials shippers and transporters must comply with specific requirements of 49 CFR Part 171  
 31 including proper classification, labeling, packaging, and handling. Figure 24-2 displays the locations  
 32 of designated and restricted hazardous materials transportation routes, including rail, within the  
 33 study area.

### 34 **Transported Commodities of Concern**

35 The following commodities are known to be transported through the study area by one or more  
 36 modes of transportation. Acute, short-term health effects of exposure to these chemicals  
 37 (commodities) are briefly described below. The effects of exposure to any hazardous substance  
 38 depend on many variables, including the dose, duration and route of exposure.

- 39 • Anhydrous ammonia is commercially used directly or indirectly in production of  
 40 pharmaceuticals. Anhydrous ammonia is also used in the production of fertilizer. It is a caustic  
 41 or corrosive, colorless gas. Ammonia is an irritant and corrosive to the skin, eyes, respiratory

1 tract and mucous membranes. Exposure to liquid or rapidly expanding gases may cause severe  
2 chemical burns and frostbite to the eyes, lungs and skin (Tanner Industries, Inc. 2011).

- 3 • Crude oil, or petroleum, is a naturally occurring, combustible liquid. It is the base product that is  
4 processed to produce other petroleum products.
- 5 • Diesel, or petro-diesel, is a product of crude oil used as fuel for vehicles, trucks, ships, and  
6 generators. It is a volatile and flammable liquid. Direct contact with diesel fuel causes severe  
7 skin irritation. Inhalation of diesel fuel can result in lung damage (Phillips Petroleum Company  
8 2012).
- 9 • Gasoline is a product of crude oil used primarily as engine fuel. It is a volatile and flammable  
10 liquid. Typical gasoline contains about 150 different chemicals, including BTEX compounds.  
11 Many adverse health effects of gasoline are due to individual chemicals in gasoline, mainly BTEX,  
12 that are present in small amounts. Breathing small amounts of gasoline vapors can lead to nose  
13 and throat irritation, headaches, dizziness, nausea, vomiting, confusion and breathing  
14 difficulties. Symptoms from swallowing small amounts of gasoline include mouth, throat and  
15 stomach irritation, nausea, vomiting, dizziness and headaches. Some effects of skin contact with  
16 gasoline include rashes, redness and swelling. Being exposed to large amounts of gasoline can  
17 lead to coma or death (Agency for Toxic Substances and Registry 1996).
- 18 • Natural gas consists primarily of methane and is a colorless and nearly odorless gas. It is used in  
19 building heating/cooling, water heaters, and clothes dryers, and as an alternative automobile  
20 fuel. Natural gas is volatile and flammable. Acute dizziness may result immediately or shortly  
21 after exposure to methane with oxygen levels of less than 15% in air; no long-term health effects  
22 are known to be associated with exposure to methane (State of Wisconsin 2010).
- 23 • Propane is normally a colorless gas, but it can be compressed into a transportable liquid. It is  
24 used as a fuel for barbecues, portable stoves, and residential central heating. It is known as  
25 liquefied petroleum gas (LPG or LP gas) when it is used as a vehicle fuel. Propane is volatile and  
26 flammable. Potential health effects associated with short-term exposure to propane include:  
27 dizziness, disorientation, excitation (hallucinations, euphoria); nausea and vomiting;  
28 unconsciousness; cardiac arrest; and frostbite (contact with liquid) (U.S. Department of Labor  
29 Occupational Health and Safety Administration 2003).
- 30 • Ethanol, also known as ethyl alcohol, pure alcohol, and grain alcohol, is used as a solvent of  
31 substances intended for human consumption, including flavorings, colorings, and medicines. It is  
32 also used as a fuel for heat and light, and as a fuel additive for internal combustion engines. It is  
33 a volatile, flammable, colorless liquid. Pure ethyl alcohol (200 proof) is a skin, eye, and lung  
34 irritant (Sciencelab.com, Inc. 2013).
- 35 • Coal fly ash is a residue generated in the combustion of coal. The main components of coal fly  
36 ash are oxides of silicon, aluminum, iron, and calcium, with lesser amounts magnesium, sulfur,  
37 sodium, and potassium. Other metals and metal-like elements are found in trace quantities –  
38 arsenic, cadmium, beryllium, thallium, nickel, lead, manganese, chromium, selenium, zinc, cobalt,  
39 mercury, and other metals. Some fly ash is recycled and used in Portland cement and asphalt  
40 cement, and is used as an engineering material for soil stabilization and embankment  
41 construction. *In vitro* studies have shown a link between coal fly ash exposure and DNA damage  
42 (Borm 1997), and occupational studies have indicated that prolonged exposure to coal ash  
43 results in decreased lung function (Schilling et al. 1988).

- 1       • Radioactive material occurs in many forms. Radioactive material is commonly used in industrial  
2       processes, to measure moisture, thickness, or other process parameters, and for such  
3       applications as inspecting welds, and in medicine in diagnostic and therapeutic procedures. The  
4       type and severity of adverse health effects from radiation are dependent on the amount and  
5       duration of radiation exposure. Adverse health effects from radiation exposure generally range  
6       from acute exposure effects including skin burns, nausea, weakness, hair loss, or diminished  
7       organ function, to DNA mutations and cancer (U.S. Environmental Protection Agency 2011b).
- 8       • Common acids and bases used in industry and research include sodium hydroxide; ammonium  
9       hydroxide; potassium hydroxide; hydrochloric acid; sulfuric acid; nitric acid; perchloric acid;  
10      and phosphoric acid. Strong acids and bases such as these are corrosive to skin, as well as nasal  
11      and lung tissue (if inhaled).

## 12      **Pipelines**

13      Pipelines are generally present throughout the study area and several pipelines are aligned west to  
14      east across the study area's southern half. Figure 24-3 displays the locations of study area oil and  
15      gas pipelines.

16      The main commodities transported through the pipelines are crude oil, refined petroleum products,  
17      and natural gas. A small portion of the pipelines carry more than one commodity. Pipeline depths  
18      could not be determined from publicly available mapping information.

19      Most of the study area pipelines are owned and operated by Pacific Gas and Electric Company. Other  
20      owners include Chevron Texaco, Standard Pacific Gas Line Inc., Sacramento Municipal Utility  
21      District, Kinder Morgan, and Equilon Pipeline Company LLC.

## 22      **Rail**

23      Union Pacific Railroad (UPRR) and BNSF Railway (formerly Burlington Northern Santa Fe Railway)  
24      (BNSF Railway) are the major railroads in the Delta. Two smaller railroads operate locally: the  
25      Central California Traction Company (CCT) and the Sierra Northern Railway. Both are short-line  
26      railroads at the Ports of Stockton and West Sacramento, respectively. These railroads provide  
27      service to UPRR and BNSF at the respective ports of their operations (Central California Traction  
28      Company 2010; Sierra Northern Railway 2010). For locations of railroads in the Delta and  
29      immediate vicinity, please refer to Figure 24-2. Chapter 19, *Transportation*, provides additional  
30      information on rail transport in the study area.

31      On their national rail network, BNSF carries liquefied petroleum gas, ethanol, plastics and chemicals,  
32      and other unspecified hazardous materials (BNSF Railway 2010). On its California routes, UPRR  
33      transports various chemicals, manufactured goods, agricultural products, industrial products, and  
34      energy products (Union Pacific Railroad 2010).

35      The exact types, quantities, or volumes of commodities transported through the study area by UPRR  
36      and BNSF Railway are not publicly available, presumably a function of hazardous materials security  
37      plans required by DOT, described in Section 24.1.2.6, *Hazardous Materials Transportation*. Such non-  
38      disclosure is also consistent with definitions and regulations pertaining to protection of sensitive  
39      security information at 49 CFR 1520, Parts 1520.5(a)(3) and (8)(i); and 1520.9, applicable to  
40      maritime, rail and aviation transportation. It is assumed that commodities carried on the short-line  
41      railroads would be transferred to the main railroad companies; however, for the same reasons this

1 cannot be confirmed because of the safety and proprietary issues restricting access to commodity  
2 information from the ports, and state and federal agencies.

3 The short-line Sierra Northern Railway handles approximately 7,000 cars annually. Publicly-  
4 available information indicates commodities carried by Sierra Northern Railway include unspecified  
5 chemicals, ethanol, and propane (Sierra Northern Railway 2010). Another short line railroad, the  
6 CCT, carries commodities such as plastics, unspecified chemicals, anhydrous ammonia, fly ash,  
7 fertilizer, ethanol, and calcium chloride. (Central California Traction Company 2010).

## 8 **Federal, State, and County Roadways**

9 Designated hazardous materials transportation routes avoid population centers, environmentally  
10 sensitive areas, narrow bridges, and tunnels. These routes are generally wider to provide easier  
11 access for first responders en route to an event (e.g., accident, release, or spill). Figure 24-2 shows  
12 the California designated routes for hazardous materials.

13 Designated hazardous materials routes in the study area are listed below.

- 14 • I-5, generally along the east side of the Delta boundary, and extending from Sacramento to south  
15 of Tracy.
- 16 • I-80, along the northern Delta boundary, and extending to Sacramento.
- 17 • I-680, generally along the western boundary of the Suisun Marsh boundary.
- 18 • I-205, aligned from west to east across the southern portion of the study area.
- 19 • State Route (SR) 113, on the west Delta boundary, where it intersects with SR 12.
- 20 • SR 12, aligned from west to east across the northeastern most boundary of Suisun Marsh, and  
21 then across the central study area from Rio Vista to Lodi.
- 22 • SR 4, generally aligned from west to east across the southern portion of the study area from  
23 Pittsburg to Stockton.
- 24 • SR 33, at the southernmost portion of the study area, is a south-north trending highway.
- 25 • Byron Highway, a county road along the southwestern boundary of the study area; it intersects  
26 with SR 4 and trends southeasterly to the intersection with I-205.
- 27 • West Grant Line Road, a county road along the southern boundary of the study area and just  
28 south of I-205. It is a west–east trending highway.
- 29 • Mountain House Parkway, a county road at the southern Delta boundary. It is a south–north  
30 route that extends from the intersection with I-580 to the intersection with Byron Highway.
- 31 • South Chrisman Road, a county road in the southernmost portion of the study area and  
32 extending from the intersection with I-580 to the intersection with West Grant Road.

33 Restricted hazardous materials routes are those that are not ideal as hazardous materials  
34 transportation corridors because of their proximity to population centers or environmentally  
35 sensitive areas, or because they contain narrow bridges, tunnels, or features that would limit access  
36 in the event of a hazardous materials release. The Federal Motor Carrier Safety Administration  
37 identifies non-radioactive hazardous materials restricted routes. These routes are identified on  
38 Figure 24-2.

1 A portion of I-80 (San Francisco-Oakland Bay Bridge) is identified as a hazardous materials  
 2 restricted route for specified hazardous materials. There are a number of alternative highway routes  
 3 within and around the study area in the event of a hazardous materials accident and/or release.  
 4 Refer to Chapter 19, *Transportation*, for more detail about highways in the Delta.

## 5 **Marine Transportation**

6 Ships using ports in the study area transport hazardous materials by the Sacramento River, the San  
 7 Joaquin River, the Sacramento River Deep Water Ship Channel (SRDWSC), and Stockton Deep Water  
 8 Ship Channel (SDWSC). Ships enter the mainland at the Port of San Francisco, travel through San  
 9 Pablo Bay, Suisun Bay, and Honker Bay before making their way to either the Sacramento River or  
 10 the San Joaquin River, where they travel the SRDWSC or SDWSC to the port of choice. The Port of  
 11 West Sacramento and the Port of Stockton lie within the study area.

12 The Port of West Sacramento is located on the Sacramento River and the SRDWSC. This port's  
 13 location provides for immediate access to major highways and rail service. I-80 is approximately  
 14 0.25 mile from the front gate of the port. BNSF, UPRR, and Sierra Northern Railway provide rail  
 15 service to the port. Intermodal services provided at the port are receiving from and loading out to  
 16 ship, truck, or rail car. Typical cargoes at the Port of West Sacramento include cement, bulk and  
 17 bagged fertilizer, pelletized Kaolin clay, and anhydrous ammonia (City of West Sacramento 2010).

18 The Port of Stockton is located on the SDWSC, approximately 1 mile from I-5 and other  
 19 interconnecting major highway systems. It is centrally located, providing service for shipment and  
 20 warehouse storage facilities for containerized and liquid bulk and dry bulk cargo. BNSF and UPRR  
 21 serve these facilities. Commodities that are brought through the Port of Stockton include bulk  
 22 materials, such as aggregate, coal, petroleum coke, ores, clay, sulfur, and anhydrous ammonia (Port  
 23 of Stockton 2010).

### 24 **24.1.2.7 Wildfire Hazards**

25 In general, wildfire is a serious hazard in undeveloped areas with extensive areas of non-irrigated  
 26 vegetation. Fire hazard classification varies by areas in and around the study area. For example, a  
 27 portion of Yolo County west of Esparto and Winters is classified as having moderate to very high  
 28 wildfire risk; the very high risk areas are concentrated in the northwest portion of the county  
 29 bordering Lake, Colusa, and Napa counties and are outside of the study area. Most of the remaining  
 30 undeveloped lands in Yolo County are unzoned and represent minimal to moderate fire risk. In  
 31 Solano County, the foothills and mountainous watershed areas are classified as very high fire hazard  
 32 severity zones. The Cordelia Hills, Potrero Hills, Cement Hills, and western English Hills are all  
 33 designated as high-risk fire areas (Solano County 2008). As another example, fire hazards are  
 34 considerable throughout Contra Costa County because of highly vegetated areas containing wildlife  
 35 habitats. The threat of brush fires is greatest during late summer. These fires burn hot and rapidly,  
 36 and, combined with winds, can become destructive crown fires (fires that advance through canopy  
 37 fuels more or less independently of surface fires). In Alameda County, the potential for destructive  
 38 wildland fires is relatively high throughout the county's undeveloped hill areas because of the  
 39 rolling to rugged terrain, continuous flammable vegetation cover, and long and dry summers with  
 40 high wind conditions.

### 24.1.3 Airports within 2 Miles of the Water Conveyance Option Footprints or Restoration Opportunity Areas

There were three public and eight private airports within the Plan Area identified as being within 2 miles of one or more of the five water conveyance alignment footprints. These airports are described briefly below.

#### 24.1.3.1 Public Airports

**Byron Airport.** This airport is located 2 miles south of Bryon, and is owned by the county of Contra Costa. Byron Airport has two runways, and averages 164 operating aircraft per day, based on a 12-month period ending December 31, 2012 (AirNav, LLC 2013a). There is no control tower. Fuel is sold on site.

**Lost Isle Seaplane Base.** This airport is located approximately 8 miles northwest of Stockton, and is owned by the California State Lands Commission. The Lost Isle Seaplane Base has one runway, and averages approximately 12 operating aircraft per year, based on a 12-month period ending February 5, 2012 (AirNav, LLC 2013b). There is no control tower.

**Franklin Field Airport.** This airport is located approximately 4 miles southeast of Franklin, and is owned by the county of Sacramento. The Franklin Field Airport has two runways, and averages approximately 89 operating aircraft per day, based on a 12-month period ending January 31, 2013 (AirNav, LLC 2013c). There is no control tower.

#### 24.1.3.2 Private Airports

**Delta Air Park.** This airport is located approximately 3 miles northeast of Brentwood, in Oakley.

**Garibaldi Brothers.** This airport is located in Benicia, and has one grass runway. There is no control tower.

**Maine Prairie Airport.** This airport is located 3 miles south of Dixon, and has one, gravel-surfaced runway. There is no control tower, and permission is required to land. Maine Prairie Airport supports primarily agricultural aircraft operations (AirNav, LLC 2013d).

**Borges-Clarksburg Airport.** This airport is located approximately 2 miles northeast of Clarksburg, and has one turf runway. There is no control tower, and permission is required to land. The Borges-Clarksburg Airport averages approximately 57 operating aircraft per week, based on a 12-month period ending December 31, 2001 (AirNav, LLC 2013e).

**Spezia Airport.** This airport is located approximately 3 miles southwest of Walnut Grove and has one dirt runway. There is no control tower, and permission is required to land (AirNav, LLC 2013f).

**Walnut Grove Airport.** This airport is located in Isleton, and has one runway.

**Flying B Ranch Airport.** This airport is located approximately 3 miles southeast of Franklin, and has one turf runway. There is no control tower, and permission is required to land (AirNav, LLC 2013g).

**Funny Farm Airport.** This airport is located approximately 3 miles northeast of Brentwood, and has a single asphalt runway. There is no control tower, and permission is required to land (AirNav, LLC 2013h).

## 1 **24.2 Regulatory Setting**

2 This section describes federal and state statutes that provide the regulatory basis for conducting  
 3 assessments of the potential hazardous materials, hazardous waste, or hazardous constituents that  
 4 may be present at and potentially released into the Delta. This section also discusses local general  
 5 plan policies and actions related to hazards and hazardous materials.

### 6 **24.2.1 Federal Plans, Policies, and Regulations**

7 The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for the  
 8 enforcement of federal regulations associated with hazardous materials. The primary legislation  
 9 governing hazardous materials are the Comprehensive Environmental Response, Compensation,  
 10 and Liability Act; the Resource Conservation and Recovery Act; and the Superfund Amendments and  
 11 Reauthorization Act.

#### 12 **24.2.1.1 Comprehensive Environmental Response, Compensation and** 13 **Liability Act, as Amended**

14 The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 United  
 15 States Code [USC] Section 9601 et seq. 1980) provides federal funds to clean up uncontrolled or  
 16 abandoned hazardous waste sites, accidents, spills, discharges, and other emergency releases of  
 17 pollutants and contaminants into the environment. Through CERCLA, EPA was given authority to  
 18 seek out those parties responsible for any hazardous release and assure their cooperation in the  
 19 cleanup.

#### 20 **24.2.1.2 Resource Conservation and Recovery Act, as Amended**

21 The Resource Conservation and Recovery Act (RCRA) (42 USC Section 6901 et seq. 1976) provides  
 22 EPA with the authority to control hazardous waste from cradle-to-grave. This includes the  
 23 generation, transportation, treatment, storage, and disposal of hazardous waste. The 1984 federal  
 24 Hazardous and Solid Waste Amendments to RCRA focus on waste minimization and phasing out  
 25 land disposal of hazardous waste, as well as corrective actions for releases. Other mandates of this  
 26 law include increased enforcement authority for EPA, more stringent hazardous waste management  
 27 standards, and a comprehensive UST program. The 1986 RCRA amendments enabled EPA to  
 28 address environmental problems from underground tanks storing petroleum and other hazardous  
 29 substances. RCRA also sets forth a framework for the management of non-hazardous solid wastes.  
 30 RCRA Section 3006 allows EPA with to authorize state hazardous waste programs. Once authorized,  
 31 the state program operates in lieu of the federal program, although EPA retains enforcement  
 32 authority even after a state program has been authorized.

#### 33 **24.2.1.3 Superfund Amendments and Reauthorization Act**

34 The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to  
 35 continue cleanup activities around the country. Several site-specific amendments, definition  
 36 clarifications, and technical requirements were added to the statute, including additional  
 37 enforcement authorities. Title III of SARA authorized the Emergency Planning and Community  
 38 Right-to-Know Act (EPCRA). The objective of the EPCRA is to: (1) allow state and local planning for  
 39 chemical emergencies, (2) provide for notification of emergency releases of chemicals, and (3)

1 address communities' right-to-know about toxic and hazardous chemicals. The four major  
2 provisions of the EPCRA regulations (40 CFR Parts 350–372) are listed below.

- 3 • Emergency Planning (Parts 301–303)
- 4 • Emergency Release Notification (Part 304)
- 5 • Hazardous Chemical Storage Reporting (Parts 311–312)
- 6 • Toxic Chemical Release Inventory (Part 313)

#### 7 **24.2.1.4 Toxic Substances Control Act**

8 The Toxic Substances Control Act of 1976 (TSCA) (15 USC 2601 et seq. 1976) gives the EPA  
9 authority to establish reporting, recordkeeping and testing requirements, and restrictions relating  
10 to chemical substances and/or mixtures. TSCA addresses the production, import, use, and disposal  
11 of specific chemicals, including PCB, asbestos, radon, and lead-based paint.

#### 12 **24.2.1.5 National Emissions Standards for Hazardous Air Pollutants**

13 The Federal Clean Air Act (Clean Air Act) (42 USC 7401 et seq. 1970) requires the EPA to develop  
14 and enforce regulations to protect the general public from exposure to airborne contaminants that  
15 are known to be hazardous to human health. In accordance with Clean Water Act Section 112, EPA  
16 established National Emissions Standards for Hazardous Air Pollutants (NESHAP) to protect the  
17 public. Asbestos was one of the first hazardous air pollutants regulated under Section 11240 CFR,  
18 Subpart M, Section 61.145. Asbestos is a naturally occurring fibrous material that was historically  
19 used in many building materials for fire-proofing and insulation. In general, buildings constructed  
20 prior to 1980 have the potential for asbestos-containing materials. The EPA has classified asbestos  
21 as a Group A, known human carcinogen.

22 The California Air Resources Board, under The Asbestos Program, enforces compliance with  
23 NESHAP and investigates all related complaints, as specified by the California Health and Safety  
24 Code Section 39658(b)(1). Of the 35 air districts in California, 19 do not have an asbestos program  
25 in place. In these “non-delegated” districts, a demolition/renovation notification is required for  
26 compliance with the Asbestos NESHAP.

#### 27 **24.2.1.6 Federal Insecticide, Fungicide and Rodenticide Act**

28 The federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 USC 136 et seq. 1996) provides  
29 for federal regulation of pesticide distribution, sale, and use. All pesticides distributed or sold in the  
30 United States must be registered (licensed) by EPA. Before EPA registers a pesticide under FIFRA,  
31 the applicant must show that, among other things, use of the pesticide according to specifications  
32 “will not generally cause unreasonable adverse effects on the environment.” FIFRA imposes  
33 pesticide-labeling requirements; controls when and under what conditions pesticides can be  
34 applied, mixed, stored, loaded or used; specifies when fields can be reentered after pesticide  
35 application; and identifies when crops can be harvested. Under FIFRA, registrations and product  
36 labeling may restrict uses of pesticides. As a part of the pesticide registration, EPA classifies the  
37 product or some uses of the product as “restricted use” if it may cause unreasonable adverse effects  
38 even when used as directed on the product labeling. Only certified pesticide applicators may use  
39 restricted-use pesticides.

### 1    **24.2.1.7            Hazardous Materials Transportation Act**

2       The Hazardous Materials Transportation Act (HMTA) (49 USC 5101–5127) was enacted in 1975.  
 3       HMTA’s primary objective is to provide adequate protection against risks to life and property  
 4       inherent in commercial transportation of hazardous materials by improving the regulatory and  
 5       enforcement authority of the Secretary of Transportation. Hazardous materials, as defined by the  
 6       Secretary of Transportation are any “particular quantity or form” of a material that “may pose an  
 7       unreasonable risk to health and safety or property.” Among the material designated as hazardous  
 8       are explosives; radioactive materials; infectious substances; flammable or combustible liquids,  
 9       solids, or gases; toxic, oxidizing, or corrosive materials; and compressed gases in specified forms and  
 10      quantities. The regulations cited in the HMTA apply, but are not limited to, a person who transports  
 11      hazardous materials, designs containers for, or prepares or accepts hazardous materials for  
 12      transportation. HMTA governs safety aspects, including security, of the transportation of hazardous  
 13      materials that the Secretary of the DOT considers appropriate.

14      Enforcement of the HMTA is shared by each of the following administrations under delegations from  
 15      the Secretary of the DOT:

- 16      •   RSPA Responsible for container manufacturers, reconditioners, and retesters and shares  
 17      authority over shippers of hazardous materials.
- 18      •   Federal Highway Administration (FHWA) enforces all regulations pertaining to motor carriers.
- 19      •   Federal Railroad Administration (FRA) enforces all regulations pertaining to rail carriers.
- 20      •   Federal Aviation Administration (FAA) enforces all regulations pertaining to air carriers.
- 21      •   Coast Guard enforces all regulations pertaining to shipments by water.

### 22    **24.2.1.8            The Clean Water Act**

23      The Clean Water Act (33 USC 1251 et seq.) (described in greater detail in Chapter 8, *Water Quality*),  
 24      establishes the institutional structure for EPA to regulate discharges of pollutants into the waters of  
 25      the United States, establish water quality standards, conduct planning studies, and provide funding  
 26      for specific grant projects.

27      The EPA has provided most states with the authority to administer many of the provisions of the  
 28      Clean Water Act. In California, the State Water Resources Control Board (State Water Board) has  
 29      been designated by EPA to develop and enforce water quality objectives and implementation plans.  
 30      The State Water Board has delegated specific responsibilities for the development and enforcement  
 31      actions to the Central Valley Regional Water Quality Control Board (Central Valley Water Board).

32      Section 402 of the Clean Water Act (33 USC 1342) establishes the National Pollutant Discharge  
 33      Elimination System (NPDES) permit program to regulate point source discharges of pollutants into  
 34      waters of the United States (discussed in greater detail in Chapter 8, *Water Quality*). A NPDES permit  
 35      sets specific discharge limits for point sources discharging pollutants into waters of the United  
 36      States and establishes monitoring and reporting requirements, as well as special conditions.  
 37      Typically, NPDES permits are issued for a 5-year period by the Regional Water Quality Control  
 38      Boards (RWQCBs).

### 1    **24.2.1.9            Safe Drinking Water Act**

2       The Safe Drinking Water Act (SDWA) (42 USC 300f et seq. 6939b; 15 USC 1261 et seq.) was  
3       originally passed by Congress in 1974 to protect public health by regulating the nation's public  
4       drinking water supply. SDWA authorizes EPA to set national health-based Maximum Contaminant  
5       Levels (MCLs) for drinking water to protect against both naturally occurring and human-made  
6       contaminants that may be found in drinking water. EPA, state regulatory agencies, and water  
7       systems managers then work together to ensure these standards are met. The law was amended in  
8       1986 and 1996 and requires many actions to protect drinking water and its sources, including  
9       rivers, lakes, reservoirs, springs, and groundwater wells. EPA protects underground sources of  
10      drinking water, and many environmental regulations use the MCLs for environmental clean-up  
11      standards.

12      EPA has designated the California Department of Public Health as the primary agency to administer  
13      and enforce the requirements of the SDWA. A state or a tribe with primacy has direct oversight of  
14      the regulated public water systems and is responsible for ensuring that the systems meet all of the  
15      requirements of the drinking water regulations.

### 16    **24.2.1.10          Oil Pollution Act of 1990**

17      The Oil Pollution Act of 1990 (33 USC 2701–2762) is an amendment to the Clean Water Act. It  
18      requires certain on- and off-shore facilities, which store and use oil and fuels and which could  
19      reasonably be expected to cause substantial harm to the environment, to prepare plans to respond  
20      to a worst-case discharge of oil and threats of such a discharge to navigable waters or adjoining  
21      shores. Under the Oil Pollution Act, the Spill Prevention, Control, and Countermeasure (SPCC)  
22      Rule (40 CFR Part 112) regulates non-transportation-related onshore and offshore facilities that  
23      could reasonably be expected to discharge oil into navigable waters of the United States or adjoining  
24      shores. The act requires the preparation and implementation of site-specific SPCC plans to  
25      prevent and respond to oil discharges that could affect navigable waters.

### 26    **24.2.1.11          Federal Railroad Administration**

27      The Federal Railroad Administration (FRA) is responsible for promulgating and enforcing rail safety  
28      regulations. These regulations are codified at Title 49 CFR Parts 200–299. The FRA administers a  
29      safety program that oversees the movement of hazardous materials (including dangerous goods),  
30      such as petroleum, chemical, and nuclear products, throughout the United States' rail transportation  
31      system, including shipments transported to and from international organizations.

### 32    **24.2.1.12          Occupational Safety and Health Act**

33      The Occupational Safety and Health Administration (OSHA) administers the Occupational Safety and  
34      Health Act, (29 USC 15) which requires special training of handlers of hazardous materials,  
35      notification to employees who work in the vicinity of hazardous materials, and acquisition from the  
36      manufacturer of material safety data sheets (MSDS). An MSDS describes the proper use of hazardous  
37      materials and is intended to provide workers and emergency personnel with procedures for  
38      handling or working with that material. The Occupational Health and Safety Act also requires the  
39      training of employees to remediate any hazardous materials accidental releases.

### 1    **24.2.1.13            Safe, Efficient Use and Preservation of Navigable Airspace**

2            In administering 14 CFR Part 77, the prime objectives of the FAA are to promote air safety and the  
 3            efficient use of navigable airspace. Proponents of projects near an airport must provide the FAA with  
 4            a Notice of Proposed Construction or Alteration for review prior to initiating construction. Title 14  
 5            CFR Part 77.9 states that any person/organization who intends to sponsor any of the construction or  
 6            alterations listed below must notify the Administrator of the FAA.

- 7            ● Any construction or alteration exceeding 200 feet above ground level at its site.
- 8            ● Any construction or alteration that exceeds an imaginary surface extending outward and  
 9            upward at any of the following slopes:
  - 10            ○ 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest  
 11            runway of each airport described in paragraph (d) of Section 77.9 with its longest runway  
 12            more than 3,200 feet in actual length, excluding heliports.
  - 13            ○ 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway  
 14            of each airport described in paragraph (d) of Section 77.9 with its longest runway no more  
 15            than 3,200 feet in actual length, excluding heliports, within 5,000 feet of a public use  
 16            heliport which exceeds a 25:1 surface.
  - 17            ○ 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing  
 18            and takeoff area of each heliport described in paragraph (d) of Section 77.9.
- 19            ● Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted  
 20            upward 17 feet for an Interstate Highway that is part of the National System of Military and  
 21            Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical  
 22            distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object  
 23            that would normally traverse the road, whichever is greater, for a private road, 23 feet for a  
 24            railroad, and for a waterway or any other traverse way not previously mentioned, an amount  
 25            equal to the height of the highest mobile object that would normally traverse it, would exceed a  
 26            standard of paragraph (a) or (b) of this section.
- 27            ● Any construction or alteration on any of the following airports and heliports:
  - 28            ○ A public use airport listed in the Airport/Facility Directory, Alaska Supplement, or Pacific  
 29            Chart Supplement of the U.S. Government Flight Information Publications.
  - 30            ○ A military airport under construction, or an airport under construction that will be available  
 31            for public use.
- 32            ● An airport operated by a federal agency or the Department of Defense.
- 33            ● An airport or heliport with at least one FAA-approved instrument approach procedure.

34            There is no need to file a notice for construction or alteration in any of the instances listed here.

- 35            ● Any object that will be shielded by existing structures of a permanent and substantial nature or  
 36            by natural terrain or topographic features of equal or greater height, and will be located in the  
 37            congested area of a city, town, or settlement where the shielded structure will not adversely  
 38            affect safety in air navigation.
- 39            ● Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or  
 40            meteorological device meeting FAA-approved siting criteria or an appropriate military service

1 siting criteria on military airports, the location and height of which are fixed by its functional  
2 purpose.

- 3 • Any construction or alteration for which notice is required by any other FAA regulation.
- 4 • Any antenna structure of 20 feet or less in height, except one that would increase the height of  
5 another antenna structure.

6 Aeronautical studies are conducted by the FAA based on information provided by project  
7 proponents to ensure construction equipment and facilities will not interfere with air traffic. In  
8 addition, standards describing marking and lighting structures, such as buildings, chimneys, antenna  
9 towers, cooling towers, storage tanks, and supporting structures of overhead wires, are provided.

10 The California Department of Transportation (Caltrans), Division of Aeronautics performs safety  
11 functions with regard to the state's navigable airspace which are not FAA's responsibility:

- 12 • Permit and inspect over 300 public-use and special-use airports. In addition, under contract for  
13 the FAA, the Division conducts federal Airport Master Record inspections at non-commercial,  
14 public use airports in conjunction with the Division's periodic airport permit compliance and  
15 safety inspection program.
- 16 • Permit and inspect over 460 hospital and other special-use heliports. Conduct a periodic permit  
17 compliance and safety inspection program for hospital heliports.
- 18 • Authorize helicopter landings at or within 1,000 feet of schools (K-12).
- 19 • Evaluate the acquisition of proposed public schools (K-12), community college, and State  
20 building sites within 2 miles of an airport runway.

## 21 **24.2.2 State Plans, Policies, and Regulations**

### 22 **24.2.2.1 California Hazardous Substance Account Act**

23 The California equivalent to CERCLA, the Carpenter-Presley-Tanner Hazardous Substance Account  
24 Act (California Health and Safety Code, Chapter 6.8), was adopted in 1999. This act requires past and  
25 present owners and operators to assume liability for the remediation of hazardous waste sites  
26 within California. The regulations also contain the provisions listed below.

- 27 • Response authority for releases of hazardous substances, including spills and hazardous waste  
28 disposal sites.
- 29 • Compensation for medical expenses and lost wages or business income resulting from injuries  
30 caused by exposure to releases of hazardous substances.
- 31 • Funds for the State to assure payment of its 10% share of the costs mandated pursuant to  
32 Section 104(c)(3) of the federal act (42 USC Section 9604(c)(3)).

33 Similar to the 1996 CERCLA amendments that encourage cleanup of contaminated sites, the  
34 California Land Reuse and Revitalization Act of 2004 was codified in the Health and Safety Code,  
35 Division 20, Chapter 6.82, Sections 25395.60-25395.105. This chapter encourages the development  
36 or redevelopment of urban properties, provides processes that ensure remediation to protect public  
37 health, safety, and the environment, and relieves innocent owners, bona fide prospective  
38 purchasers, and owners of property adjacent to contaminated sites of liabilities and responsibilities  
39 that should be borne by those who caused or contributed to the contamination.

1 The Health and Safety Code Section 25356.1 requires that the California Department of Toxic  
 2 Substances Control (DTSC) prepare or approve remedial action plans for sites where hazardous  
 3 substances were released to the environment if they are listed as Superfund sites. RWQCBs have the  
 4 responsibility to make decisions regarding cleanup and abatement goals and objectives for the  
 5 protection of water quality (Section 24.2.2.9, *Water Code*). RWQCBs also regulate the disposal of  
 6 contaminated soil.

#### 7 **24.2.2.2 California Hazardous Waste Control Law**

8 The California Hazardous Waste Control Law (California Health and Safety Code Chapter 6.5 of  
 9 Division 20) is the basic hazardous waste statute in California and is administered by DTSC. This law  
 10 is similar to, but generally more stringent than, RCRA, and applies to a broader range of hazardous  
 11 wastes, and requires recycling and waste reduction programs. Under this law, DTSC is authorized to  
 12 administer California's hazardous waste program and implement the federal program in California.  
 13 Title 22, Division 4.5 contains DTSC's hazardous waste regulations.

#### 14 **24.2.2.3 Hazardous Waste Program**

15 Generation, transportation, treatment, storage, and disposal of characteristic and listed hazardous  
 16 wastes are regulated under the Health and Safety Code Sections 25100–25250.28. As part of  
 17 hazardous waste regulation, Health and Safety Code Sections 25250–25250.28 regulate PCBs in  
 18 used oil and prohibit used oil recycling or reuse if the oil contains 5 parts per million or greater of  
 19 PCBs.

#### 20 **24.2.2.4 Hazardous Materials Release Response Plans and Inventory** 21 **(Business Plan)**

22 Similar to SARA, the Hazardous Materials Release Response Plans and Inventory (or Hazardous  
 23 Materials Business Plan) was codified in the Health and Safety Code Division 20, Chapter 6.95,  
 24 Sections 25500–25520. This code requires an owner or operator of a facility that handles hazardous  
 25 materials in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200  
 26 cubic feet of compressed gas, or extremely hazardous substances above the threshold planning  
 27 quantity (40 CFR Part 355, Appendix A) to inventory the hazardous materials, develop a site map,  
 28 develop an emergency plan and implement a training program for employees. This information  
 29 must be submitted to the statewide information management system (California Environmental  
 30 Reporting System). There are state and local exemptions to hazardous materials that must be  
 31 reported, which include, but are not limited to medical gases (oxygen, nitrogen and nitrous oxide) in  
 32 a medical office ≤The purpose of the Hazardous Materials Business Plan is to prevent or minimize  
 33 hazards to public health, safety and the environment from a release of hazardous material(s).  
 34 Hazardous Materials Business Plans must contain information on the location, type, quantity, and  
 35 health risks of hazardous materials handled, used, stored, or disposed of, which could be  
 36 accidentally released into the environment. The CUPA maintains the inventory and emergency  
 37 contact information submitted by applicable businesses and facility owners and operators in a data  
 38 management system and provides this information to firefighters, health officials, planners, public  
 39 safety officers, health care providers, regulatory agencies, and other interested persons have access  
 40 to the plans.

### 1    **24.2.2.5                    California Underground Storage Tank Program**

2            The California Underground Storage Tank Program is designed to: (1) prevent contamination from  
3            the improper storage of hazardous substances stored underground, (2) ensure that existing tanks  
4            are properly maintained, inspected, tested, and upgraded, and (3) ensure that new USTs meet  
5            appropriate standards. The California regulations are codified in the Health and Safety Code,  
6            Division 20, Chapter 6.7, Sections 25280–25299.8.

### 7    **24.2.2.6                    Aboveground Petroleum Storage Act (APSA) of 2007**

8            California adopted a statewide program to determine the amount and type of hazardous substances  
9            being stored in aboveground tanks under the Health and Safety Code Division 20, Chapter 6.67,  
10            Sections 25270–25270.13. APSA applies to storage tank facilities with aggregate petroleum storage  
11            capacities of 1,320 gallons or more and requires development and implementation of a SPCC Plan  
12            consistent with 40 CFR Part 112. Facilities must submit annual Tank Facility Statements and,  
13            depending on Certified Unified Program Agency (CUPA) requirements, may be required to submit to  
14            periodic inspection.

### 15   **24.2.2.7                    California Solid Waste**

16            Solid waste in California is regulated under Title 14, Division 7 and Title 27, Division 2 of the  
17            California Code of Regulations (CCR). These regulations establish minimum standards for the  
18            handling and disposal of solid wastes. Both the State Water Board and the California Integrated  
19            Waste Management Board have oversight and approval authority over local enforcement agencies  
20            that permit and take enforcement action on solid waste management facilities. Public Resources  
21            Code (PRC) Sections 43200–43219, 43020, 43020.1, 43021, 43030, 43101, and 43103 govern the  
22            local enforcement agencies.

23            Prior to disposal at a landfill facility, contaminated solids must be properly characterized in  
24            accordance with EPA publication SW-846, Test Methods for Evaluating Solid Waste,  
25            Physical/Chemical Methods. Based on the analytical results, material will likely be classified as one  
26            of the following.

- 27            ● Nonhazardous waste
- 28            ● Non-RCRA hazardous waste (state regulated)
- 29            ● RCRA hazardous waste (federally regulated)

30            Each waste classification has unique requirements for assessment, handling, and disposal. Many  
31            options exist for the disposal of contaminated soils including treatment, recycling, and disposal at a  
32            permitted facility or landfill. Landfills in California accepting contaminated solids are classified as:

- 33            ● Class I – Accepts wastes classified as RCRA hazardous by the CCR
- 34            ● Class II – Accepts hazardous waste (RCRA or non-RCRA) designated as having a lower risk, or  
35            nonhazardous waste that significantly threatens water quality
- 36            ● Class III – Accepts nonhazardous waste and inert material

### 1    **24.2.2.8           Control of Pesticides**

2           The California Legislature enacted Food and Agricultural Code sections similar to the EPA FIFRA  
3           program to promote and protect the agricultural industry, and to protect public health, safety, and  
4           welfare. Divisions 6 and 7, Sections 11401–14155 of the Food and Agricultural Code, regulate pest  
5           control operations, application of pesticides, and applicators, and restrict the use of some pesticides  
6           and are implemented by the CalEPA, Department of Pesticide Regulation.

### 7    **24.2.2.9           Water Code**

8           The state Water Code Division 7, Chapter 5 requires the State Water Board and DTSC to establish  
9           policies and procedures for investigation of, and remediation and abating the effects of, a hazardous  
10          substance discharge that creates, or threatens to create, a condition of contamination, pollution, or  
11          nuisance. The policies and procedures must be consistent with the policies and procedures  
12          established pursuant to the Health and Safety Code, Section 25355.7. The policies and procedures  
13          are established in State Water Board Resolution No 92-49.

14          The Porter-Cologne Water Quality Control Act (codified at Division 7 of the California Water Code)  
15          allows the State Water Board to impose water pollution control requirements on discharges (see  
16          Chapter 6, *Surface Water*, for more information on the Porter-Cologne Act).

### 17   **24.2.2.10         State Water Board Resolution No. 92-49**

18          The State Water Board adopted Resolution Number 92-49, Policies and Procedures for Investigation  
19          and Cleanup and Abatement of Discharges, under California Water Code Section 13304. This  
20          resolution establishes policies and detailed procedures for all investigations and remediation of any  
21          discharge (release) that causes, or threatens to cause, conditions of soil, water pollution, or nuisance  
22          associated with the migration of waste or fluid from waste management units. The resolution also  
23          requires coordination among other agencies, including DTSC, the EPA, and local governances.

### 24   **24.2.2.11         California Law for Conservation of Petroleum**

25          The California Law for Conservation of Petroleum (Division 3, Oil and Gas, Chapter 1, Oil and Gas  
26          Conservation) regulates operators of oil wells and oil production facilities. Sections within Chapter 1  
27          govern notices of intent to drill wells, proper abandonment of oil wells to ensure protection of  
28          surface and groundwater, and abandonment of old wells that pose a present danger to life, health, or  
29          natural resources (land, air, and water). Sections also establish emergency reporting requirements  
30          for oil discharges to land.

### 31   **24.2.2.12         California Department of Conservation, Division of Oil, Gas, and** 32                           **Geothermal Resources Construction-Site Plan Review Program**

33          The Division of Oil, Gas, and Geothermal Resources (DOGGR) regulates drilling, operation,  
34          maintenance, and abandonment of oil, gas, and geothermal wells. Plugging and abandonment of oil  
35          and gas wells is to be done according to Title 14 CCR, Division 2, Chapter 4, Subchapter 1, Article 3,  
36          Sections 1723–1723.8. As part of DOGGR’s responsibilities for implementing PRC Section 3208.1,  
37          districts have developed the Construction-Site Plan Review Program to assist local agencies in  
38          identifying and reviewing the status of oil or gas wells near proposed development. The program is  
39          aimed at addressing potentially dangerous issues associated with development near oil or gas wells.  
40          DOGGR serves in an advisory role to make relevant information available to local agencies. Section

1 3208.1 of the PRC states that if any property owner, developer, or local permitting agency either  
 2 fails to obtain an opinion from DOGGR or fails to follow the advice of DOGGR when development  
 3 occurs near an oil or gas well, then the owner of the property on which the well is located may be  
 4 responsible for re-abandonment costs should a future problem arise with the well. To use the  
 5 DOGGR Well Review Program, the developer or property owner submits a completed Well Review  
 6 Program Application to DOGGR. Before issuing building or grading permits, local permitting  
 7 agencies review and implement DOGGR's preconstruction well requirements. Interaction between  
 8 local permitting agencies and DOGGR helps resolve land-use issues and allows for responsible  
 9 development in oil and gas fields.

### 10 **24.2.2.13 California Occupational Safety and Health Act**

11 The California Occupational Safety and Health Administration (Cal-OSHA) regulates worker safety  
 12 similar to federal OSHA but also requires preparation of an Injury and Illness Prevention Program,  
 13 an employee safety program of inspections, procedures to correct unsafe conditions, employee  
 14 training, and occupational safety communication. In addition, Cal-OSHA regulations indirectly  
 15 protect the general public by requiring construction managers to post warnings signs, limit public  
 16 access to construction areas, and obtain permits for work considered to present significant risk of  
 17 injury or to worker health, such as work in tunnels under potentially hazardous conditions and  
 18 asbestos and lead abatement.

### 19 **Tunnel Safety Orders of the California Code of Regulations**

20 CCR Title 8, Division 1, Chapter 4, Subchapter 20, Sections 8400–8469 “Tunnel Safety Orders,” sets  
 21 forth safety standards and provisions, intended to protect workers during tunneling operations.  
 22 Section 8425, “Operation of Gassy and Extrahazardous Tunnels” identifies safety measures, as  
 23 follows, to ensure safe work in tunnels classified as “gassy” or “extrahazardous” by Cal-OSHA’s  
 24 Mining and Tunneling Unit.

25 (a)(1) Before any electrical equipment or services are installed or used in places classified as Gassy or  
 26 Extrahazardous, they shall be permissible, approved, or in accordance with Title 8, Electrical  
 27 Safety Orders and acceptable to the Division of Occupational Safety and Health (the Division).

28 EXCEPTION: In tunnels where the classification is based on toxic gas(es) which does not present a  
 29 fire or explosive hazard, the provisions which address a source of ignition shall not be applied.

30 (2) Before any internal combustion engine is permitted to enter any place classified as Gassy or  
 31 Extrahazardous, the internal combustion engine shall be of an approved, permissible safe  
 32 design acceptable to the Division.

33 (b) Smoking shall be prohibited and the employer shall be responsible for collecting all personal  
 34 sources of ignition such as matches, lighters, cameras and radios from all persons entering the  
 35 tunnel.

36 (c) Welding, cutting, or other hot work and/or spark producing operations shall not be permitted  
 37 while a probe hole is being drilled or when the tunnel face is being excavated, and shall only be  
 38 done in atmospheres containing less than 10 percent of the lower explosive limit (LEL) and  
 39 under the direct supervision of qualified persons. Tests for gas and vapors shall be made before  
 40 the start and continuously during such operations.

41 (d) Tests for flammable gas shall be conducted in the return air and measured not less than a  
 42 distance of 12 inches from any surface in any open workings.

43 (e) Tests for flammable petroleum vapors shall be conducted in the return air and measured at a  
 44 distance not less than 3 inches from any surface in any open workings.

- 1 (f) Whenever gas levels in excess of 10 percent of the LEL are encountered, the Division shall be  
 2 notified immediately. Any work therein shall be conducted with extra care and steps shall be  
 3 taken to increase ventilation.
- 4 (g) A fixed system of continual automatic monitoring equipment shall be provided for the heading,  
 5 muck handling, transfer points and return air of tunnels using mechanical excavators. The  
 6 monitors shall have sensors so situated that they will detect any anticipated gas encountered and  
 7 shall signal the heading, give visual and audible warning and shut down electric power in the  
 8 tunnel, except for acceptable ventilation and pumping equipment necessary to evacuate  
 9 personnel, when 20 percent or more of LEL is encountered. In addition, a manual shut down  
 10 control shall be provided near the heading.
- 11 (h) In tunnels driven by conventional drill and blast methods, the air shall be tested for gas prior to  
 12 re-entry after blasting and continuously when employees are working underground.
- 13 (i) The main ventilation systems shall exhaust flammable gas or vapors from the tunnel, shall be  
 14 provided with explosion relief mechanisms, and shall be constructed of fire-resistant materials.
- 15 (1) In any tunnel classified Extrahazardous, the main ventilation system shall contain a cutoff  
 16 switch capable of stopping all electrical machinery underground automatically should the  
 17 fan fail or its performance fall below minimum power needed to maintain a safe atmosphere.
- 18 (j) A refuge chamber or alternate escape route shall be maintained within 5,000 feet of the face of a  
 19 tunnel classified as gassy or extra-hazardous. Workers shall be provided with emergency rescue  
 20 equipment and trained in its use. Refuge chambers shall be equipped with a compressed air  
 21 supply, a telephone, and means of isolating the chamber from the tunnel atmosphere. The  
 22 emergency equipment, air supply, and rescue chamber installation shall be acceptable to the  
 23 Division.
- 24 (k) At a tunnel classified as Gassy or Extrahazardous, the Division shall permit the tunnel to operate  
 25 up to but not exceeding 20 percent of the LEL without further notification if the required  
 26 precautionary measures are in effect and permission is given in writing.

## 27 **Asbestos Standard for Construction**

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

33 CCR Title 8, Subchapter 4, Article 4, Section 1529 regulates asbestos exposure in all construction  
 34 work as defined in Section 1502 including but not limited to the following.

- 35 ● Demolition or salvage of structures where asbestos is present.
- 36 ● Removal or encapsulation of materials containing asbestos.
- 37 ● Construction, alteration, repair, maintenance, or renovation of structures, substrates, or  
 38 portions thereof that contain asbestos.
- 39 ● Installation of products containing asbestos.
- 40 ● Asbestos spill/emergency cleanup.
- 41 ● Transportation, disposal, storage, containment of and housekeeping activities involving asbestos  
 42 or products containing asbestos, on the site or location at which construction activities are  
 43 performed.

- 1       • Excavation which may involve exposure to asbestos as a natural constituent which is not related
- 2       to asbestos mining and milling activities.
- 3       • Routine facility maintenance.
- 4       • Erection of new electric transmission and distribution lines and equipment, and alteration,
- 5       conversion and improvement of the existing transmission and distribution lines and equipment.

#### 6       **24.2.2.14       Safe Drinking Water and Toxics Enforcement Act**

7       The Safe Drinking Water and Toxics Enforcement Act (also known as Proposition 65) was  
 8       established in the California Health and Safety Code in Division 20, Chapter 6, Sections 25249.5–  
 9       25249.13 in 1986. The Act requires the state to publish a list of chemicals known to cause cancer,  
 10      birth defects, or other reproductive harm. The list must be updated at least once a year and included  
 11      approximately 800 chemicals in 2011. The Act requires California businesses to notify the public  
 12      about significant quantities of chemicals released into the environment at levels exceeding identified  
 13      risk levels. Under the Act, California businesses are prohibited from knowingly discharging  
 14      substantial quantities of listed chemicals into drinking water sources. The Office of Environmental  
 15      Health Hazard Assessment (OEHHA) administers the Proposition 65 program. OEHHA is part of the  
 16      California Environmental Protection Agency (Cal EPA) and evaluates all currently available scientific  
 17      information on substances considered for inclusion on the Proposition 65 list.

#### 18      **24.2.2.15       Accidental Release Prevention Law**

19      In 1986, California adopted the La Follette Bill, which was the predecessor to the Accidental Release  
 20      Prevention Law. The La Follette Bill regulated “acutely hazardous materials” and was intended to  
 21      expand control over materials that can produce toxic clouds after fires, explosions or other  
 22      accidents. In 1996, the state codified the programs created under the La Follette Bill into the  
 23      Accidental Release Prevention Law in Sections 25531–25543.3 of the California Health and Safety  
 24      Code. The Accidental Release Prevention Law provides consistency with federal laws (i.e., EPCRA  
 25      and the Clean Air Act) that allow local oversight of both the state and federal programs. The state  
 26      and federal laws are similar in their requirements; however, the California threshold planning  
 27      quantities for regulated substances are lower than the federal values. Local agencies may set lower  
 28      reporting thresholds or add chemicals to the program.

29      Beginning in 1997, the Accidental Release Prevention Law has been implemented by the state’s local  
 30      CUPAs. The California Accidental Release Prevention (CalARP) program was implemented on  
 31      January 1, 1997 by CalEMA and replaced the California Risk Management and Prevention Program  
 32      (RMPP). The purpose of the CalARP program is to prevent accidental releases of substances that can  
 33      cause serious harm to the public and the environment, to minimize the damage if releases do occur,  
 34      and to satisfy community right-to-know laws. This is accomplished by requiring businesses that  
 35      handle more than a threshold quantity of a regulated substance listed in the regulations to develop a  
 36      Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident  
 37      factors present at a business and the mitigation measures that can be implemented to reduce this  
 38      accident potential.

39      The CalARP program is implemented at the local government level by CUPAs also known as  
 40      Administering Agencies (AAs). The CalARP program is designed so these agencies work directly  
 41      with the regulated businesses. The CUPAs determine the level of detail in the RMPs, review the

1 RMPs, conduct facility inspections, and provide public access to most of the information.  
 2 Confidential or trade secret information may be restricted.

### 3 **24.2.2.16 Fire Hazard Severity Zones**

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

### 10 **24.2.2.17 State Aeronautics Act**

11 The State Aeronautics Act (California Public Utilities Code, Section 21001 et seq.) authorizes  
 12 Caltrans and local governments to protect navigable airspace and prohibits the construction of any  
 13 structure or permitting any natural growth of a height which would constitute a hazard to air  
 14 navigation unless Caltrans first issues a permit (California Public Utilities Code, Section 21659). The  
 15 permit is not required if the FAA has determined that the structure or growth does not constitute a  
 16 hazard to air navigation or would not create an unsafe condition for air navigation. Caltrans requires  
 17 notification, in writing, for proposed construction of any state building or enclosure within 2 miles  
 18 of any airport before an agency acquires title to the property for the building or enclosure or for an  
 19 addition to an existing site (California Public Utilities Code, Section 21655). Caltrans would respond  
 20 with a written investigation report of the proposed site and provide recommendations, as necessary,  
 21 to reduce potential hazards to air navigation. DWR would adhere to these recommendations, which  
 22 would reduce the potential for adverse effects on air safety (e.g., recommendations for the marking  
 23 and/or lighting of temporary or permanent structures exceeding an overall height of 200 feet above  
 24 ground level), as would compliance with the recommendations of the OE/AAA.

## 25 **24.2.3 Local Plans, Policies, and Regulations**

### 26 **24.2.3.1 Certified Unified Program Agencies**

27 The Unified Program consolidates, coordinates, and makes consistent the administrative  
 28 requirements, permits, inspections, and enforcement activities of six environmental and emergency  
 29 response programs. The Cal EPA and other state agencies set the standards for their programs, and  
 30 local governments implement the standards. These local implementing agencies are called CUPAs.  
 31 For each county, CUPAs regulate and oversee these documents and activities.

- 32 ● Hazardous materials business plans.
- 33 ● California accidental release prevention plans or federal risk management plans.
- 34 ● The operation of ASTs and USTs.
- 35 ● Universal waste and hazardous waste generators and handlers.
- 36 ● Uniform Fire Code implementation.
- 37 ● Onsite hazardous waste treatment.
- 38 ● Inspections, permitting, and enforcement.

- 1       • Proposition 65 reporting.
- 2       • Emergency response.

### 3   **24.2.3.2           County General Plans**

4       This section identifies relevant policies and actions related to hazards and hazardous materials in  
5       local general plans of the counties within the study area: Alameda, Contra Costa, Sacramento, San  
6       Joaquin, Solano, and Yolo.

#### 7   **Alameda County**

##### 8   **East County Area Plan**

9       The *East County Area Plan* (Alameda County 2000) was adopted as part of the general plan by the  
10      County in May 1994. The policies from that plan's Environmental Health and Safety Element  
11      relevant to the proposed project are listed here.

12      **Policy 291:** The County shall strive to meet federal and state air quality standards for local air  
13      pollutants of concern. In the event that standards are exceeded, the County shall require appropriate  
14      mitigation measures on new development.

15      **Policy 294:** The County shall require new development projects to include traffic and air pollutant  
16      reduction measures to help attain air quality standards. For non-residential projects, these  
17      measures could include Transportation Demand Management programs such as ridesharing and  
18      transit promotion; for residential projects, these measures could include site plan features to reduce  
19      traffic trip generation such as mixed use development and transit-oriented development.

20      **Policy 300:** The County shall review proposed projects for their potential to generate hazardous air  
21      pollutants.

22      **Policy 303:** The County shall incorporate the provisions of the Association of Bay Area  
23      Government's (ABAG) Bay Area Air Quality Plan and the Bay Area Air Quality Management District's  
24      (BAAQMD) Air Quality and Urban Development Guidelines into project review procedures.

25      **Policy 304:** The County shall notify cities and the BAAQMD of proposed projects which may  
26      significantly affect air quality.

27      **Policy 320:** The County shall consider, in reviewing development projects and subdivision of  
28      agricultural lands, the severity of natural fire hazards, potential damage from wildland and  
29      structural fires, the adequacy of fire protection services, road access, and the availability of an  
30      adequate water supply and pressure.

31      **Policy 324:** The County shall require the use of fire resistant building materials, fire-resistant  
32      landscaping, and adequate clearance around structures in "high" and "very high" fire hazard areas.

33      **Policy 306:** The County shall protect surface and groundwater resources by:

- 34      • preserving areas with prime percolation capabilities and minimizing placement of potential  
35      sources of pollution in such areas;

- 1 • minimizing sedimentation and erosion through control of grading, quarrying, cutting of trees,  
2 removal of vegetation, placement of roads and bridges, use of off-road vehicles, and animal-  
3 related disturbance of the soil;
- 4 • not allowing the development of septic systems, automobile dismantlers, waste disposal  
5 facilities, industries utilizing toxic chemicals, and other potentially polluting substances in  
6 creekside, reservoir, or high groundwater table areas when polluting substances could come in  
7 contact with flood waters, permanently or seasonally high groundwaters, flowing stream or  
8 creek waters, or reservoir waters; and,
- 9 • avoiding establishment of excessive concentrations of septic systems over large land areas.

## 10 **Sacramento County**

11 The Hazardous Materials and Safety Elements of the Sacramento County general plan, *Sacramento*  
12 *County General Plan of 2005–2030* (Sacramento County 2011) set forth goals and policies intended  
13 to help identify and assess the potential for hazards to occur in the county; to provide public  
14 preparedness and protection; and reduce threats to public safety. The following policies are relevant  
15 to the proposed project.

### 16 **Hazardous Materials Element**

17 **HM-2.** Improve cooperation, information gathering, and information availability within existing  
18 County programs.

19 **HM-4.** The handling, storage, and transport of hazardous materials shall be conducted in a manner  
20 so as not to compromise public health and safety standards.

21 **HM-7.** Encourage the implementation of workplace safety programs and to the best extent possible  
22 ensure that residents who live adjacent to industrial or commercial facilities are protected from  
23 accidents and the mishandling of hazardous materials.

24 **HM-8.** Continue the effort to prevent ground water and soil contamination.

25 **HM-10.** Reduce the occurrences of hazardous material accidents and the subsequent need for  
26 incident response by developing and implementing effective prevention strategies.

27 **HM-9.** Continue the effort to prevent surface water contamination.

28 **HM-11.** Protect residents and sensitive facilities from incidents which may occur during the  
29 transport of hazardous materials in the County.

30 **HM-12.** Continue the effort through the Sacramento Metropolitan Air Quality Management District  
31 (AQMD) to inventory and reduce toxic air contaminants as emission standards are developed.

32 **HM-14.** Support local enforcement of hazardous materials regulations.

### 33 **Safety Element**

34 **SA-23.** The County shall require that all new development meets the local fire district standards for  
35 adequate water supply and pressure, fire hydrants, and access to structures by firefighting  
36 equipment and personnel.

1 **SA-24.** The County shall require, unless it is deemed infeasible to do so, the use of both natural and  
 2 mechanical vegetation control in lieu of burning or the use of chemicals in areas where hazards from  
 3 natural cover must be eliminated, such as levees and vacant lots.

4 **SA-27.** The County shall require, where appropriate, the use of fire resistant landscaping and  
 5 building materials for new construction developments that are cost effective.

6 **SA-28.** The County shall encourage and require, to the maximum extent feasible, automatic fire  
 7 sprinkler systems for all new commercial and industrial development to reduce the dependence on  
 8 fire department equipment and personnel.

9 **SA-29.** The County and fire districts will work together to regulate hazardous materials to mitigate  
 10 emergency responses.

## 11 **Yolo County**

12 The Health and Safety Element of the Yolo County general plan (*2030 Countywide General Plan*  
 13 [County of Yolo 2009]) establishes a goal, policies, and, as part of the implementation program,  
 14 actions to ensure safety from hazardous materials in and around the county. The plan contains three  
 15 policies relevant to the project alternatives.

16 **Policy HS-4.1:** Minimize exposure to the harmful effects of hazardous materials and waste. Protect  
 17 the community and the environment from hazardous materials and waste.

18 **Policy HS-4.2:** Inspect businesses regularly for compliance with their Hazardous Materials  
 19 Inventory and Hazardous Materials Business Emergency Response Plan.

20 **Policy HS-4.3:** Encourage the reduction of solid and hazardous wastes generated in the county.

## 21 **Solano County**

22 The Public Health and Safety Element of the Solano County general plan, 2008 Solano County  
 23 General Plan (Solano County 2008), sets forth goals and policies intended to help protect people and  
 24 property from natural and human-made hazards, promote public health, and preserve air and water  
 25 quality. Policies that may be applicable to the project alternatives are as follows.

26 **HS.P-20:** Require that structures be built in fire defensible spaces and minimize the construction of  
 27 public facilities in areas of high or very high wildfire risk.

28 **HS.P-21:** Prohibit non-farm-related development and road construction for public use in areas of  
 29 extreme wildfire risk.

30 **HS.P-22:** Require new developments in areas of high and very high wildfire risk to incorporate fire-  
 31 safe building methods and site planning techniques into the development.

32 **HS.P-26:** Minimize the risks associated with transporting, storing, and using hazardous materials  
 33 through methods that include careful land use planning and coordination with appropriate federal,  
 34 state, or County agencies.

35 **HS.P-44:** Minimize health impacts from sources of toxic air contaminants, both stationary (e.g.,  
 36 refineries, manufacturing plants) as well as mobile sources (e.g., freeways, rail yards, commercial  
 37 trucking operations).

## 1 **San Joaquin County**

2 The Public Health and Safety element of the San Joaquin County general plan, *San Joaquin County*  
 3 *Countywide General Plan*, contains policies intended to minimize the risks from natural and man-  
 4 made hazards (San Joaquin County 1992). Policies that may be applicable to the project alternatives  
 5 are listed below.

### 6 **Fire Safety**

7 **Policy 2:** New development shall have water systems which meet County fire flow requirements or  
 8 shall provide adequate onsite water storage, as determined by the County Fire Warden or by the  
 9 local fire district having jurisdiction, if the district has a fire prevention bureau.

10 **Policy 3:** In areas with high and extreme wildfire hazards, the County shall limit development to  
 11 rural residential densities or lower, or encourage cluster development and require on-site fire  
 12 suppression measures.

13 **Policy 5:** All development shall have adequate access for fire fighting and emergency equipment.

### 14 **Hazardous Materials and Wastes**

15 **Policy 1:** Hazardous materials and wastes shall not contaminate air or water resources or soils.

16 **Policy 2:** The use, storage and disposal of hazardous materials and wastes shall be controlled to  
 17 prevent harm to individuals.

18 **Policy 3:** Land uses and structures which contain hazardous materials or wastes which may be a  
 19 safety hazard for nearby areas shall be located away from existing and planned populated areas.

20 **Policy 4:** The use of hazardous materials and the creation of hazardous wastes shall be minimized.

21 **Policy 5:** All development shall be consistent with the County's Waste Management Plans.

## 22 **Contra Costa County**

23 A comprehensive update to the *Contra Costa County General Plan 2005–2020* was adopted on  
 24 January 18, 2005 to guide future growth, development, and resource conservation through 2020  
 25 (Contra Costa County 2005). The Safety Element established policies and programs to protect the  
 26 community from risks associated with seismic, geologic, flooding, wildfire, and other hazards.  
 27 Policies that may be relevant to the project alternatives are listed below.

28 **10-61:** Hazardous waste releases from both private companies and from public agencies shall be  
 29 identified and eliminated.

30 **10-62:** Storage of hazardous materials and wastes shall be strictly regulated.

31 **10-63:** Secondary containment and periodic examination shall be required for all storage of toxic  
 32 materials.

33 **10-64:** Industrial facilities shall be constructed and operated in accordance with up-to-date safety  
 34 and environmental protection standards.

1 **10-67:** In order to provide for public safety, urban and suburban development should not take place  
 2 in areas where they would be subject to safety hazards from oil and gas wells. Development near oil  
 3 and gas wells should meet recognized safety standards.

4 **10-68:** When an emergency occurs in the transportation of hazardous materials, the County Office  
 5 of Emergency Services shall be notified as soon as possible.

## 6 **24.3 Environmental Consequences**

7 This section evaluates the potential effects of hazards and hazardous materials that could result  
 8 from implementation of the action alternatives. An analysis of the consistency of the alternatives  
 9 with applicable regulations is included. This analysis separates each of the alternatives' proposed  
 10 impacts into three categories.

- 11 • Potential impacts occurring during construction of the water conveyance facilities.
- 12 • Potential impacts occurring during the long-term operation and maintenance of the water  
 13 conveyance facilities.
- 14 • Potential impacts occurring during implementation of Conservation Measures 2–11, 13, 14, 16  
 15 and 19 (CM2–CM11, CM13, CM14, CM16, CM18, and CM19), or Environmental Commitments 3,  
 16 4, 6–11, and 16 under the non-HCP alternatives.

17 Impacts associated with construction, and operation and maintenance of the water conveyance  
 18 facilities are analyzed at a project level. Impacts associated with the habitat conservation and  
 19 restoration actions are analyzed at a programmatic level for the BDCP alternatives (Alternatives 1A–  
 20 2C, 3, 4, 5, and 6A–9) and at a project level for the non-HCP alternatives (Alternatives 4A, 2D, and  
 21 5A).

22 Project effects associated with hazards or hazardous materials are not anticipated outside of the  
 23 study area, in the Upstream of the Delta, including State Water Project (SWP) and Central Valley  
 24 Project (CVP) waterways and reservoirs, or in the SWP/CVP Export Service Areas because hazards  
 25 and hazardous materials effects are primarily associated with constructing and operating the  
 26 proposed conveyance facilities. Because of this, SWP and CVP waterways and reservoirs and the  
 27 SWP/CVP Export Service Areas are not discussed in this section.

28 Additionally, five proposed conservation measures or Environmental Commitments related to  
 29 reducing other stressors (listed below and described in detail in Chapter 3, *Description of*  
 30 *Alternatives*), would be implemented under most action alternatives but are not anticipated to result  
 31 in any meaningful effects associated with hazards and hazardous materials in the study area. The  
 32 actions implemented under these conservation measures or Environmental Commitments do not  
 33 entail physical activities that are likely to release hazardous materials to the environment, nor  
 34 would they be expected to result in any direct or indirect, permanent or substantial impacts creating  
 35 hazards to the public or environment. As such, the following measures will not be addressed further  
 36 in this impact analysis.

- 37 • CM12 or Environmental Commitment 12—Methylmercury Management
- 38 • CM15 or Environmental Commitment 15—Localized Reduction of Predatory Fishes
- 39 • *CM17 Illegal Harvest Reduction*

- 1       • *CM20 Recreational Users Invasive Species Program*
- 2       • *CM21 Nonproject Diversions*

### 3    **24.3.1    Methods for Analysis**

4       This section addresses the assessment methods used for the analysis of potential environmental  
5       impacts associated with construction and operation/maintenance of the proposed alternative. As a  
6       result of alternative implementation, potential impacts would be generated and/or created by  
7       reasonably foreseeable accident conditions involving the release of hazardous materials; routine  
8       transport, use, and disposal of hazardous materials; construction activities; and routine operation  
9       and maintenance activities.

10       In general, the analysis methodology was developed by reviewing various technical reports and  
11       other data sources including a 2009 Phase I Initial Site Assessment (ISA), a 2010 ISA for locations  
12       where SR 160 would be realigned, and the conceptual engineering reports (CERs [discussed in  
13       Section 24.3.1.2, *Conceptual Engineering Reports*]) that would be implemented as part of  
14       construction and operation/maintenance of the water conveyance facilities. A description of the  
15       ISAs and other data sources relative to their use for the analysis of potential impacts are discussed  
16       below.

#### 17   **24.3.1.1        Initial Site Assessments**

##### 18    **Phase I Initial Site Assessment**

19       In May 2009 an ISA titled “Bay Delta Conservation Plan Draft Phase I Initial Site Assessment,” was  
20       prepared by HDR, Inc. The ISA is included with this document as Appendix 24A, *Draft Phase 1 Initial*  
21       *Site Assessment*. The purpose of the ISA was to identify potential risk sites for contamination.

22       This ISA identified “Recognized Environmental Conditions” (REC) for three conveyance alignment  
23       options (“East Alignment”, “West Alignment” and “Through Delta Alignment”), as they were known  
24       prior to May 2009, that may adversely affect construction or alternative alignment right-of-way  
25       acquisition (if required). The locations of these three alignments under consideration in 2009 differ  
26       somewhat from the four alignments being considered in this impact analysis (See Figure 1, *ISA*  
27       *Identified Sites Locator Map* in the 2009 Phase I Initial Site Assessment in Appendix 24A, *Draft Phase*  
28       *1 Initial Site Assessment*, and Figures 3-2, 3-4, 3-6, 3-9, and 3-16 in Chapter 3, *Description of*  
29       *Alternatives*). As such, once a water conveyance alternative is chosen, a conveyance-alignment-  
30       specific (i.e., site-specific) Phase 1 ISA would be performed prior to construction. The information  
31       provided in the 2009 ISA is sufficient to identify the range of hazards and hazardous materials that  
32       should be considered in the study area.

33       In 2009, the ISA was conducted in the initial review of the Delta to determine if there were any areas  
34       that could be identified in the environmental record search. This ISA was conducted in general  
35       conformance with the scope and limitations of the American Society for Testing and Materials  
36       (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site  
37       Assessment Process E 1527-05. The primary deviation from the E 1527-05 standard practice was  
38       the lack of owner interviews. Details regarding any additional exceptions or deletions from the  
39       standard practice are described in Appendix 24A, *Draft Phase 1 Initial Site Assessment*.

1 Although the ISA identified RECs, the limited scope of this ISA allowed only for recognition of “sites  
 2 of concern” (SOCs). Many of these SOCs constitute RECs for the study area, while others that might  
 3 be RECs have insufficient information at this time to make that determination. A final determination  
 4 of whether a site constitutes a REC would be made later in the process, when a corridor-specific ISA  
 5 is performed that includes more detailed site-specific investigation.

6 The ISA includes the results of environmental database searches that obtained location information  
 7 for sites on regulatory hazardous materials databases. Maps corresponding with the East Alignment,  
 8 West Alignment, and Through Delta Alignment (Separate Corridors) alternative corridor options  
 9 were prepared in February 2009. These maps display the locations of historical and/or existing  
 10 facilities that are listed on federal, state, and local hazardous materials databases. The results were  
 11 generally used to determine if and where any component of the three alignment options would  
 12 potentially encounter a facility listed on a hazardous materials database.

13 In addition, the ISA characterized the onsite and offsite impact probability for each SOC as either  
 14 intermediate, low, medium, or high. The impact probability determinations of the ISA were used to  
 15 determine if and where any component of the project alternatives would potentially encounter a  
 16 facility identified as a SOC. The findings of the ISA provided information on the potential for  
 17 accidental releases of contaminants that were used historically, used currently, or exist at a given  
 18 location due to construction activities associated with the project alternatives. How this ISA was  
 19 used in this analysis for the purpose of determining the potential for encountering an SOC during  
 20 construction of the action alternatives is described in Section 24.3.1.3, *Construction Effects*.

## 21 **Initial Site Assessment for Realignment of SR 160**

22 In October 2010 an Initial Site Assessment was done to assess the potential for hazardous waste  
 23 within the “project limits” on State Route 160 (SR 160) between Hood and Clarksburg of two  
 24 different action alternatives (California Department of Transportation 2011). This ISA is included in  
 25 Appendix 24B, *2010 Initial Site Assessment*. Specifically, a site assessment was done at four locations  
 26 along SR 160 (PM 31.9, PM 29.5, PM 26.8 and PM 25.1) where the project proposed to realign SR  
 27 160 to accommodate the proposed intakes for “Alternative 1” and “Alternative 2”.<sup>1</sup>

- 28 • The initial site assessment determined that there is the potential for hazardous waste within the  
 29 “project limits” proposed at the time with respect to the following. Lead-contaminated soil along  
 30 SR 160 due to the historical use of leaded gasoline, leaded airline fuels, waste incineration;
- 31 • Hazardous levels of lead and chromium in the yellow paint used for the traffic stripes on SR 160,  
 32 which will be ground off with roadway material; and
- 33 • Hazardous chemicals in the wood posts associated the metal beam guardrails on SR 160.

34 How this ISA was used in this analysis for the purpose of determining the potential for encountering  
 35 potential existing contamination within the water conveyance construction footprint during  
 36 construction of the action alternatives is described below in Section 24.3.1.3, *Construction Effects*.  
 37 Caltrans requires that any ISA over 1 year old be redone/updated, as needed. Accordingly, an  
 38 alignment-specific ISA would be performed later in the decision-making process for this proposed  
 39 project.

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<sup>1</sup> The conceptual design for “Alternative 1” entailed realigning SR 160 and construction an intersection at four locations. “Alternative 2” would realign SR 160 and place a T-intersection at each of the four locations.

### 1    **24.3.1.2            Conceptual Engineering Reports**

2            The CERs were consulted for information on construction methods and materials, planned  
3            operational and maintenance parameters, and detailed information on potential features in the  
4            study area that may present hazards to the construction workers, the public and the environment.

### 5    **24.3.1.3            Construction Effects**

6            As discussed above, construction could potentially cause effects associated with the creation of  
7            hazards and accidental release of hazardous materials, as well as the routine transport, use, and  
8            disposal of hazardous materials. Specifically, potential effects would occur if construction resulted in  
9            one of the following conditions.

- 10            ●    Encounter contaminated soils, sediment, or groundwater resulting from historical land use  
11            practices (Figure 24-4).
- 12            ●    Release hazardous constituents into the environment as a result of the disturbance of previous  
13            or existing oil and gas wells (Figure 24-5).
- 14            ●    Release hazardous constituents into the environment as a result of the disturbance of pipelines  
15            or other subsurface infrastructure (Figure 24-3).
- 16            ●    Release hazardous constituents into the environment as a result of realignment of SR 160 (see  
17            2010 ISA, Appendix 24B, *2010 Initial Site Assessment*).
- 18            ●    Increase the risk of releases from vehicles carrying hazardous materials as a result of re-routing  
19            such vehicles around the construction activities.
- 20            ●    Improper use and/or disposal of hazardous materials.

21            Potential effects were determined using a variety of resources and standards as described below.

### 22    **Release of Hazardous Materials**

23            Construction impacts related to potential upset or accident conditions regarding transportation of  
24            hazardous materials via truck, trains, ships, and pipelines were evaluated qualitatively. Designated  
25            and restricted transportation routes were mapped and compared with the construction footprint  
26            and the study area boundaries to evaluate the increased potential for releases/spills of hazardous  
27            materials as a result of traffic re-routing.

### 28    **Potential Rerelease of Soil or Groundwater Contamination from Sites of Concern**

29            Using GIS methods, mapped locations of SOCs identified in the 2009 ISA (*Appendix 24A, Draft Phase*  
30            *1 Initial Site Assessment*) were overlain with the current alignment alternatives for each of the water  
31            conveyance facilities construction footprints to assess the relative risk of encountering  
32            contaminated soil or groundwater during clearing, grading, excavation, and construction of the  
33            action alternatives. For the purpose of the impact analysis presented below, a conservative  
34            approach was taken, and SOCs within 0.5 mile of the construction footprint were considered to have  
35            the potential to pose a hazard due to migration of contaminants in groundwater. DTSC's Hazardous  
36            Waste and Substances Sites ("Cortese List"), compiled pursuant to California Government Code  
37            65962.5, make up a subset of the mapped SOCs.

## 1 **Oil and Gas Wells and Processing Facilities**

2 Mapped locations of oil and gas wells and processing facilities were overlain with the construction  
3 footprints (Figure 24-5) to assess the relative risk of disturbing a well or encountering petroleum  
4 products or processing chemicals in soil or groundwater, respectively. The number of oil and gas  
5 wells within the construction footprints was obtained from engineering documents and the CERs.  
6 The relative risk to each alternative from encountering such point sources was assessed by  
7 determining whether wells had been identified by engineering staff or whether a processing facility  
8 is within 0.5 mile of the construction footprint.

## 9 **Regional Pipelines and Electrical Transmission Lines**

10 Mapped locations of regional pipelines and electrical transmission lines were overlain with the  
11 construction footprint (Figures 24-3 and 24-6, respectively) to assess the relative risk of disturbance  
12 of these utilities during construction. The relative risk to each alternative from encountering  
13 pipelines was assessed by determining whether pipelines or electrical transmission lines were  
14 within the construction footprint of the alternative. If so, the risk was assumed to be high.

## 15 **Reusable Tunnel Material**

16 Reusable tunnel material (RTM) is the by-product of tunnel excavation using an earth pressure  
17 balance tunnel boring machine. RTM from the construction of the proposed water conveyance  
18 facilities would be a mixture of soil cuttings and soil conditioning agents (water, foaming agents,  
19 and/or polymers). Tunnel boring operations would require the use of soil conditioners in order to  
20 control the behavior of excavated material. Soil conditioners vary and are typically selected by the  
21 tunneling contractor. The soil conditioner used would likely include water, surfactant foam,  
22 polymers, bentonite, or any combination thereof, although modern practice uses foams and  
23 polymers that are more environmentally friendly than bentonite, non-toxic and biodegradable.  
24 Surfactant foam is essentially a mixture of air and diluted foaming agent in water. Foam and/or  
25 polymers enhance the tunnel boring machine's ability to control face pressure, and are also used to  
26 reduce the level of torque required to cut the ground, which, in turn, reduces the required power  
27 input to the motors. Foam makes the cuttings more plastic and less permeable. Polymers are used to  
28 condition the soil, either by absorbing water or by affecting the deformation and flow characteristics  
29 of the soil. The main purpose of polymers is to help support the face and encourage loose, coarse-  
30 grained soils to move smoothly through the excavation chamber. Polymers can also be used to  
31 reduce the tendency of soils with large amounts of highly plastic clay to stick to the cutterhead.

32 RTM may require chemical or physical treatment, in addition to drying, prior to returning to the  
33 environment. In this analysis, environmental impacts associated with RTM management were  
34 analyzed based on stated toxicity of the additives, estimates of the volume of anticipated residue, the  
35 CERs, and the results of tests done using soil samples from within the proposed tunnel footprint  
36 mixed with representative soil conditioners (URS 2014).

37 In March 2013, a study was conducted on native soil samples collected from several sites along the  
38 tunnel footprint. These soil samples were mixed with representative soil conditioner products to  
39 mimic RTM. These mixture samples were tested to assess the geotechnical properties to determine  
40 if RTM would be suitable as structural fill; the potential toxicity; and the suitability for plant growth  
41 for both wildlife habitat and agricultural use (URS 2014)

1 While the study consisted of a limited number of samples and tests, and does not constitute a  
2 complete evaluation of RTM, based on the results DWR concluded that RTM, following storage and  
3 drying, is suitable for strengthening Delta levees; habitat restoration; fill on subsiding Delta islands;  
4 and as structural fill for construction of conveyance facilities (URS 2014). However, the contractor  
5 would need to chemically characterize RTM and associated decant liquid prior to reuse or discharge.  
6 Consultation with governing regulatory agencies would be required to obtain the necessary  
7 approvals and permits.

### 8 **Sensitive Receptor Analysis**

9 For the purposes of this analysis, schools, hospitals, and parks are considered sensitive receptors.  
10 Parks and schools not only provide a location for people to congregate, but generally these are  
11 places where sensitive populations, in terms of health, such as the elderly and children congregate  
12 when outdoors (parks) or indoors (children in school). Hospitals are areas where the infirm are  
13 housed, which, like children and the elderly, are more susceptible to the adverse effects of exposure  
14 to toxic chemicals and other pollutants/contaminants due to compromised immune systems, for  
15 example. For the purposes of this analysis, “parks” were limited to local community-type parks  
16 where the density of people would likely be greater than other areas that might be defined as a  
17 “park” for the purposes of recreation, such as marinas, wildlife areas, etc.

18 The proximity of the water conveyance facilities to schools, parks and hospitals was calculated using  
19 GIS methods to determine the distance from the construction footprints to sensitive receptors in the  
20 study area.

### 21 **Wildland Fire Hazard Analysis**

22 Wildland fire safety hazards were analyzed using GIS methods to map Fire Hazard Severity Zones.  
23 GIS maps were obtained from the California Department of Forestry and Fire Protection Fire Hazard  
24 Severity Zone Re-Mapping Project. County fire hazard maps from Alameda, Contra Costa,  
25 Sacramento, San Joaquin, Solano, and Yolo Counties were combined with alignments for each of the  
26 water conveyance facilities construction footprints and Restoration Opportunity Area (ROA)  
27 locations to assess the relative risk of wildland fire hazard throughout the study area.

### 28 **Air Safety Hazard Analysis**

29 Locations of airports were overlain with alternative footprints, and all airports within 2 miles of the  
30 construction footprint were identified. The airports were then evaluated to determine whether they  
31 were classified as public use airports by the FAA.

### 32 **Routine Transport, Use, or Disposal of Hazardous Materials**

33 The CERs and accompanying documentation were reviewed to determine construction materials  
34 and methods.

#### 35 **24.3.1.4 Operation/Maintenance Activities Impacts**

36 The CERs were consulted for information on operation and maintenance activities, frequencies and  
37 materials, and expected operational and maintenance parameters that may present hazards to  
38 operations and maintenance workers, the public and the environment.

### 1 **24.3.1.5 Cumulative Impacts Related to Hazards and Hazardous Materials**

2 In addition to direct and indirect impacts, the section contains an analysis of the cumulative effects  
 3 specific to hazards and hazardous materials. Cumulative impact assumptions include programs,  
 4 projects, and policies included in Existing Conditions, No Action Alternative, and reasonably  
 5 foreseeable probable future programs and projects (See Appendix 3D, *Defining Existing Conditions*,  
 6 *No Action Alternative*, *No Project Alternative*, and *Cumulative Impact Conditions*, for a list of the  
 7 programs, projects, and policies considered in the cumulative analyses).

### 8 **24.3.2 Determination of Effects**

9 Potential impacts associated with hazards and hazardous materials were evaluated based on the  
 10 eight criteria listed below. Each of these criteria was in turn used to capture potential effects during  
 11 construction, operation, and maintenance of the water conveyance facilities, and implementation of  
 12 the conservation measures, or Environmental Commitments under the non-HCP alternatives), as  
 13 applicable. Based on these criteria, implementation of one of the alternatives could result in an  
 14 adverse effect (under NEPA) and a significant impact (under CEQA) if it would result in any one of  
 15 the following conditions.

- 16 ● Create a substantial hazard to the public or the environment through the routine transport, use,  
 17 or disposal of hazardous materials or disruption of known road, rail, or river hazardous  
 18 materials transport routes. For the purposes of this analysis, a “substantial hazard” is defined as  
 19 the direct exposure of the public, including construction or operation and maintenance  
 20 personnel, or surface water and groundwater to physical and/or chemical hazards (i.e.,  
 21 hazardous materials as defined by Title 22 of the California Code of Regulations, Division 4.5)  
 22 through construction or operational activities or interference with hazardous materials  
 23 transport routes.
- 24 ● Create a substantial hazard to the public or the environment through reasonably foreseeable  
 25 upset and accident conditions involving the release of hazardous materials to the environment.  
 26 For the purposes of this analysis, a “substantial hazard” related to “the release of hazardous  
 27 materials to the environment” is defined as circumstances in which construction or operational  
 28 activities involving the use of hazardous materials or release of hazardous materials are located  
 29 in, or where these hazardous materials could directly or indirectly negatively affect surface  
 30 water bodies or groundwater or the public.
- 31 ● Expose sensitive receptors (e.g., schools, hospitals or parks) located within 0.25 mile of a  
 32 construction site to hazardous materials, substances, or waste.
- 33 ● Be located on a known hazardous materials site or conflict with a known hazardous materials  
 34 site and as a result would create a substantial hazard to the public or the environment through  
 35 activities that could release materials from that site.
- 36 ● Result in a safety hazard associated with an airport or private airstrip. For the purpose of this  
 37 analysis, air “safety hazards” are defined as conditions in which high-profile construction  
 38 equipment (200 feet or taller) or project structures could be located within 2 miles of an airport  
 39 and would potentially result in aircraft accidents. Further, increasing the risk of bird-aircraft  
 40 strikes as a result of implementation of the project alternatives would also be considered an air  
 41 safety hazard.

- Expose people or structures to a substantial risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. For the purpose of this analysis, “substantial risk of loss, injury or death involving wildland fires” is defined as circumstances in which construction or operational activities would increase the potential for wildland fire hazards or would occur within an area designated as a High or Very High Fire Hazard Severity Zone.

The analysis of other resources that may be affected by hazards or hazardous materials, or are relevant to the analysis herein, are described in these nine chapters of this document and are not discussed further in this chapter’s analysis.

- Chapter 6, *Surface Water*, describes the potential for an increase in exposure of people or structures to flooding due to construction or operations of the conveyance facilities or implementation of the habitat restoration facilities.
- Chapter 8, *Water Quality*, describes the potential changes in water quality and beneficial uses of water in the study area as a result of implementing the proposed project. Further, bioaccumulation models that link the concentration of methylmercury in the water to resultant concentrations in fish tissues for methylmercury are also presented in Chapter 8.
- Chapter 9, *Geology and Seismicity*, discusses the potential for loss of property, personal injury, or death from structural failure; ground settlement; slope failure and instability; ground failure; landslides; and seiche or tsunami as a result of the construction and/or operation of the water conveyance features and implementing the project alternatives.
- Chapter 11, *Fish and Aquatic Resources*, discusses the potential for increased exposure of covered fish species in the study area to methylmercury as a result of implementing the action alternatives.
- Chapter 14, *Agricultural Resources*, describes agricultural practices that may have resulted in the release of agricultural chemicals including pesticides and herbicides.
- Chapter 22, *Air Quality and Greenhouse Gases*, describes potential public health risks related to hazardous emissions during construction and operation of the alternatives.
- Chapter 25, *Public Health*, discusses bioaccumulation of toxicants (e.g., methylmercury) in fish and aquatic organisms consumed by humans; the potential for the action alternatives to mobilize or increase bioaccumulative constituents in the study area; pathogens in recreational waters; electromagnetic fields (EMFs) from proposed transmission lines that could potentially affect the public; potential drinking water quality issues related to the implementation of the project alternatives; and potential hazards associated with vector-borne diseases.
- Chapter 26, *Mineral Resources*, describes the occurrence and production of hazardous materials such as oil and natural gas.
- Chapter 28, *Environmental Justice*, describes fish consumption rates in minority populations and concerns that these populations in the Delta have about potential mercury and pesticide contamination in the fish they consume.

### **Compatibility with Local Plans and Policies**

Constructing the proposed water conveyance facilities, and implementing the conservation measures or environmental commitments could result in potential incompatibilities with local plans

1 and policies related to protecting communities and the environment from hazards such as the  
2 release of hazardous materials and wildfire. Plans and policies of counties that coincide with the  
3 study area provide guidance related to various hazards and safety issues, as detailed in Section  
4 24.2.3, *Local Plans, Policies, and Regulations*. This section summarizes ways in which the project  
5 alternatives would be compatible or incompatible with those plans and policies. Potential  
6 incompatibilities with local plans or policies, or with those not binding on the state or federal  
7 governments, do not necessarily translate into adverse environmental effects under NEPA or CEQA.  
8 Even where an incompatibility “on paper” exists, it does not by itself constitute an adverse physical  
9 effect on the environment, but rather may indicate the potential for a proposed activity to have a  
10 physical effect on the environment. The relationship between plans, policies, and regulations and  
11 impacts on the physical environment is discussed in Chapter 13, *Land Use*, Section 13.2.3.

12 The general plans of Alameda County (*East County Area Plan*), Sacramento, Yolo, Solano, San  
13 Joaquin, and Contra Costa Counties have elements addressing health, safety, and hazardous  
14 materials. They variously address concerns about traffic management; wildfire risk; protecting soils  
15 and surface and groundwater resources from contamination; and protecting individuals from  
16 harmful exposure to hazardous substances. Policies and regulations for hazardous materials may  
17 require or advocate information sharing among programs and prompt contact with emergency  
18 services offices in event of accidents; safe handling, transportation, and storage of hazardous  
19 materials; workplace safety programs that protect residents and properties adjacent to worksites  
20 involving hazardous materials; efforts to prevent groundwater, surface water, and soil  
21 contamination; hazardous materials accident prevention; and protecting sensitive residents and  
22 facilities from transportation incidents involving hazardous materials. They advocate minimizing  
23 use of hazardous substances and creation of waste; appropriate location and containment;  
24 adherence to the most up-to-date safety standards for construction and operation; and inspecting  
25 businesses for compliance with Hazardous Materials Inventory and Hazardous Materials Business  
26 Emergency Response Plans. Regarding fire safety, the counties variously require or encourage new  
27 developments to meet fire district standards; have adequate water systems and access for  
28 firefighting and emergency equipment; use natural and mechanical methods of vegetation control  
29 (in lieu of burning or chemicals) to eliminate fire hazards; to use fire resistant landscaping and  
30 building materials and methods; and the use of automatic fire sprinkler systems.

31 The selected alternative would include mitigation measures and environmental commitments  
32 designed to avoid or minimize hazards to people and the environment. To protect soil, surface  
33 water, groundwater, and sensitive receptors (effects on which are assessed under Impacts HAZ-1,  
34 HAZ-2, HAZ-6, HAZ-7) during construction, operations, and maintenance of the water conveyance  
35 facilities and conservation measures, project proponents would implement Mitigation Measure HAZ-  
36 1a to identify and remediate for soil and groundwater contaminants prior to beginning construction.  
37 Mitigation Measure HAZ-1b would survey potential demolition sites for hazardous materials prior to  
38 demolition, and dispose of them according to federal, state, and local regulations. Mitigation  
39 Measure HAZ-6 would ensure dewatered solids are tested prior to disposal and disposed of in  
40 accordance with federal, state, and local regulations, thereby avoiding release of hazardous  
41 substances into the environment. Project proponents would also implement Mitigation Measure  
42 TRANS-1a: *Implement a site specific construction traffic management plan*, which, among other  
43 traffic-related measures (discussed in Chapter 19, *Transportation*) would help minimize  
44 construction-related disruption to and/or interference with hazardous materials transport routes in  
45 the study area. Mitigation Measure UT-6a: *Verify locations of utility infrastructure* and UT-6c:  
46 *Relocate utility infrastructure in a way that avoids or minimizes any effect on worker and public health*

1 *and safety*, address safety issues related to oil and gas wells and pipelines, and electrical  
 2 transmission lines (as discussed under Impact HAZ-3). In addition, Mitigation Measure HAZ-8:  
 3 *Consult with individual airports and USFWS, and other relevant organizations* will minimize, to the  
 4 greatest extent possible, hazards related to increased bird-aircraft strikes as a result of  
 5 implementing conservation measures in the vicinity of airports (this hazard is analyzed under  
 6 Impact HAZ-8).

7 Project proponents also would incorporate environmental commitments intended to avoid, prevent,  
 8 or minimize hazardous spills related to water conveyance construction or implementing  
 9 conservation measures, and/or mitigate for such occurrences (these potential effects are discussed  
 10 under Impacts HAZ-1, HAZ-6, and HAZ-7). Environmental commitments include developing and  
 11 implementing Stormwater Pollution Prevention Plans (SWPPPs); Spill Prevention, Containment, and  
 12 Countermeasure Plans (SPCCPs); Hazardous Materials Management Plans (HMMPs); and a Barge  
 13 Operations Plan. Furthermore, environmental commitments include employing best management  
 14 practices to treat, reuse, or dispose of spoils, RTM, and dredged material in accordance with  
 15 applicable regulations. The project proponents will also coordinate planning, engineering, design  
 16 and construction, operation, and maintenance phases of the alternative with the appropriate  
 17 agencies.

18 The project alternatives would also be compatible with county plans and policies in terms of fire  
 19 protection because the proposed water conveyance facilities would not be located in a High or Very  
 20 High Fire Hazard Severity Zone (as described under Impact HAZ-5). Precautions would be taken to  
 21 prevent wildland fires during construction, operation, and maintenance of the water conveyance  
 22 facilities, in full compliance with Cal-OSHA standards for fire safety and prevention. Furthermore, an  
 23 environmental commitment, *Develop and Implement a Fire Prevention and Control Plan (FPCP)*,  
 24 would ensure that people or structures would not be subject to a substantial risk of loss, injury or  
 25 death involving wildland fires. Appendix 3B, *Environmental Commitments, AMMs, and CMs*, provides  
 26 details on all environmental commitments that would be incorporated into the action alternatives.

## 27 **24.3.3 Effects and Mitigation Approaches**

### 28 **24.3.3.1 No Action Alternative**

29 As described in Chapter 3, *Description of Alternatives*, the No Action Alternative describes expected  
 30 future conditions resulting from a continuation of existing policies and programs by federal, state,  
 31 and local agencies in the absence of the action alternatives as of the year 2060. The No Action  
 32 Alternative assumptions are limited to those assumptions consistent with Existing Conditions,  
 33 programs adopted, permitted or under construction during the early stages of development of the  
 34 EIR/EIS, and foreseeable changes in development that would occur with or without the proposed  
 35 project. The No Action Alternative includes clearly defined management or operational plans,  
 36 including facilities under construction as of February 13, 2009. For a full description of conditions  
 37 under the No Action Alternative, see Appendix 3D, *Defining Existing Conditions, No Action*  
 38 *Alternative, No Project Alternative, and Cumulative Impact Conditions*.

39 A selection of the programs, plans, and projects included under the No Action Alternative are  
 40 summarized in Table 24-2, along with their anticipated effects regarding hazards and hazardous  
 41 materials. A complete list and description of programs and plans considered under the No Action  
 42 Alternative is provided in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No*  
 43 *Project Alternative, and Cumulative Impact Conditions*.

1 **Table 24-2. Hazards and Hazardous Materials Effects from the Plans, Policies, and Programs under the**  
 2 **No Action Alternative**

Agency	Program/ Project	Status	Description of Program/Project	Hazards and Hazardous Materials Effects
Contra Costa Water District	Contra Costa Canal Fish Screen Project	Completed in 2011.	The project installed a fish screen at the Contra Costa Canal diversion at Rock Slough.	Potential for release of hazardous materials (e.g., fuel and oil) to surface water and adjacent land during installation of fish screen.
Contra Costa Water District, Bureau of Reclamation, and California Department of Water Resources	Middle River Intake and Pump Station (previously known as the Alternative Intake Project)	Completed in 2011.	The project includes a 250 cfs pump station, a screened intake structure along Victoria Canal on Victoria Island, and a pipeline across Victoria Island tunneled under Old River to the District's Old River Pump Station where it connects to existing conveyance facilities.	Potential for release of hazardous materials (e.g., fuel and oil) to Middle River and adjacent land during construction of intake and pump station, as well as disturbance of contaminated soil during construction activities (e.g., grading and excavation).
Freeport Regional Water Authority and Bureau of Reclamation	Freeport Regional Water Project	Completed in 2010.	The project includes an intake/pumping plant near Freeport on the Sacramento River and a conveyance structure to transport water through Sacramento County to the Folsom South Canal. The pumping plant diverts 185 million gallons per day.	Potential for release of hazardous materials (e.g., fuel and oil) to Sacramento River and land in project area during construction, as well as disturbance of contaminated soil during construction activities (e.g., grading and excavation).
City of Stockton	Delta Water Supply Project (Phase 1)	Completed in 2012.	This project consists of a new intake structure and pumping station adjacent to the San Joaquin River; a water treatment plant along Lower Sacramento Road; and water pipelines along Eight Mile, Davis, and Lower Sacramento Roads.	Potential for release of hazardous materials (e.g., fuel and oil) to the San Joaquin River and adjacent areas where construction and maintenance occur, as well as disturbance of contaminated sediment and soil during construction.
Reclamation District 2093	Liberty Island Conservation Bank	Completed in 2011.	The project consists of restoration of 186 acres on Liberty Island in unincorporated Yolo County. Restoration was focused on enhancing and creating tidal aquatic habitat suitable for special-status fish species (including salmon and delta smelt).	Potential for release of hazardous materials (e.g., fuel and oil) to adjacent water bodies and land during construction/restoration activities (e.g., grading), as well as disturbance of contaminated soil during construction.

Agency	Program/ Project	Status	Description of Program/Project	Hazards and Hazardous Materials Effects
Tehama Colusa Canal Authority and Bureau of Reclamation	Red Bluff Diversion Dam Fish Passage Project	Completed in 2012.	Proposed improvements include modifications made to upstream and downstream anadromous fish passage and water delivery to agricultural lands within CVP.	Potential for release of hazardous materials (e.g., fuel and oil) to the Sacramento River and land during construction of the fish ladders and pump station, as well as disturbance of contaminated soil and sediment during construction activities (e.g., grading and excavation).
Bureau of Reclamation and State Water Resources Control Board	Battle Creek Salmon and Steelhead Restoration Project	Construction is being implemented in three phases and is currently underway. The final phase is estimated to occur between 2013 and 2015.	This project includes modification of facilities at Battle Creek Hydroelectric Project diversion dam sites located on the North Fork Battle Creek, South Fork Battle Creek, and Baldwin Creek. Fish screens and ladders will be installed at various location; a fish barrier will be installed on Baldwin Creek; an Inskip Powerhouse tailrace connector and bypass will be installed on the South Fork; a South Powerhouse tailrace connector will be installed; and Lower Ripley Creek Feeder, Soap Creek Feeder, Coleman and South diversion dams, and appurtenant conveyance systems will be removed.	Potential for release of hazardous materials (e.g., fuel and oil) to Battle Creek, six tributaries, and construction areas during construction/restoration activities, as well as disturbance of potentially contaminated sediment.
Bureau of Reclamation, California Department of Fish and Wildlife, and Natomas Central Mutual Water Company	American Basin Fish Screen and Habitat Improvement Project	Completed 2012.	This three-phase project includes consolidation of diversion facilities; removal of decommissioned facilities; aquatic and riparian habitat restoration; and installing fish screens in the Sacramento River. Total project footprint encompasses about 124 acres east of the Yolo Bypass.	Potential for release of hazardous materials (e.g., fuel, solvents, and oil) to the Sacramento River and construction areas during installation of fish screens and construction/restoration activities, as well as disturbance of contaminated soil and sediment.
Bureau of Reclamation	Delta-Mendota Canal/California Aqueduct Intertie	Completed in 2012.	The purpose of the intertie is to better coordinate water delivery operations between the California Aqueduct (state) and the Delta-Mendota Canal (federal) and to provide better pumping capacity for the Jones Pumping Plant. New project	Potential for release of hazardous materials (e.g., fuel, oil, paints, solvents) during construction, and hazards to the public due disturbance of infrastructure (California-Oregon Transmission Project transmission lines).

Agency	Program/ Project	Status	Description of Program/Project	Hazards and Hazardous Materials Effects
			facilities include a pipeline and pumping plant.	
Zone 7 Water Agency and Department of Water Resources	South Bay Aqueduct Improvement and Enlargement Project	Completed in 2012.	This project includes upgrades to the South Bay Pumping Plant; raised linings on open channel sections of the aqueduct; the addition of a 450 acre-foot Dyer Reservoir; and 4.5 miles of pipeline connecting to the South Bay Pumping Plant.	Potential for release of hazardous materials (e.g., fuel, oil, solvent, paints) to surface waters and construction areas construction activities, as well as disturbance of potentially contaminated soils during grading, excavation, and other ground-disturbing activities.
National Marine Fisheries Service and U.S. Fish and Wildlife Service	2008 and 2009 Biological Opinions	Ongoing.	The Biological Opinions establish certain reasonable and prudent alternatives and reasonable and prudent measures requiring habitat restoration to be implemented.	Potential for release of hazardous materials (e.g., fuel and oil) in construction areas during construction/restoration activities, as well as disturbance of potentially contaminated sediment. Additionally, restoration for wildlife may create a risk of increased bird-strikes at local airports.

1

2 Any projects that are planned or currently under way that involve construction and operation and  
3 maintenance activities may result in potential hazards to the environment or public, and the  
4 potential exists for similar effects analyzed in this EIR/EIS. Further, projects under the No Action  
5 Alternative occurring in the study area may encounter contaminated soils and groundwater during  
6 construction. As described in Section 24.1, *Environmental Setting/Affected Environment*, past  
7 industrial and agricultural practices have contaminated soils and/or groundwater in the study area.  
8 If contamination exists, rerelease of these contaminants could present hazards to project  
9 construction worker, the general public, and/or the environment. Known and suspected  
10 contaminated soils may require sampling and analysis to determine appropriate handling in  
11 accordance with regulations in place at the time of construction. Where known or suspected  
12 contaminated groundwater would be encountered and managed during construction, sampling and  
13 determination of handling options would be required. Other potential environmental consequences  
14 related to hazards and hazardous materials from activities (construction and/or operations and  
15 maintenance) associated with programs, projects, and policies in the study area included in the No  
16 Action Alternative could include the following.

- 17 ● Release of hazardous materials (including flammable gases) from disturbance of regional fuel  
18 pipelines during construction of any projects requiring excavation in the study area.
- 19 ● Accidental releases of hazardous materials (e.g., fuels, solvents, and lubricants) and/or improper  
20 disposal of hazardous materials during construction and/or operations and maintenance of any  
21 projects in the study area.

- 1 • Release of oils, solvents, and fuels from maintaining and cleaning equipment or vehicles  
2 associated with the construction or operations and maintenance of any program and project  
3 activities.

4 The relative risks of release of hazardous constituents or subjecting the environment and public to  
5 other hazards from construction, operations, and maintenance of projects and programs under the  
6 No Action Alternative cannot be determined at this time; however, they would be similar in nature,  
7 but may vary in magnitude, to the risks identified for the action alternatives. For instance,  
8 construction activities requiring the use and maintenance of construction equipment would be  
9 anticipated to require similar hazardous materials, including fuel, oils, and lubricants. Hazardous  
10 materials like paints, solvents, and sealants would also be anticipated to be used in the construction  
11 and maintenance of structures (e.g., pumping plants, intakes) associated with the projects,  
12 programs, and plans considered under the No Action Alternative. As under the action alternatives,  
13 these materials could be accidentally released into the environment during their use. Projects  
14 requiring demolition, excavation or grading would also carry risks similar to those identified for the  
15 action alternatives. In the course of these activities, construction crews may encounter hazardous  
16 materials in existing structures (i.e., agricultural storage facilities) and infrastructure (i.e.,  
17 transmission lines or pipelines) or may encounter contaminated soil, groundwater, or sediment.  
18 Depending on the location for the implementation of these activities, sensitive receptors could be  
19 affected by the release of hazardous materials.

20 Relative to the project, it is reasonable to assume that the risks of release of hazardous chemicals or  
21 exposing the public or environment to hazards during construction and operation of smaller scale  
22 projects, for example the Delta Water Supply Project (Phase 1), would be lower. The proposed  
23 project is a large-scale project involving extensive construction of water conveyance features over  
24 an expansive area and a relatively long time period (14 years); thus, it is reasonable to assume that  
25 the potential for hazard or hazardous materials exposure risks associated with project construction  
26 and operations would be substantially greater relative to a smaller scale project or program.  
27 However, were any of the aforementioned environmental consequences to occur during  
28 implementation of the No Action Alternative, depending on the nature and severity of the impact, an  
29 adverse effect could nonetheless result, albeit potentially smaller in scale and more confined in  
30 geographic scope. Generally, though, impacts would be avoided through adherence to applicable  
31 federal, state, and local regulations; project-specific design; and implementation of best  
32 management practices (BMPs), environmental commitments, and/or mitigation, including HMMPs,  
33 SWPPPs, and SPCCPs. These practices/asures are intended to avoid, prevent, or minimize  
34 hazardous spills and construction-related hazards and/or mitigate for such occurrences. Each  
35 project implemented under the No Action Alternative would require its own separate environmental  
36 compliance process. Therefore, there would be no adverse effect related to hazards or hazardous  
37 materials with regards to implementation of the No Action Alternative absent a catastrophic event  
38 related to climate change or a seismic event (discussed below).

### 39 **Climate Change and Catastrophic Seismic Risks**

40 The Delta and vicinity are within a highly active seismic area, with a generally high potential for  
41 major future earthquake events along nearby and/or regional faults, and with the probability for  
42 such events increasing over time. Based on the location, extent and non-engineered nature of many  
43 existing levee structures in the Delta area, the potential for significant damage to, or failure of, these  
44 structures during a major local seismic event is generally moderate to high. In the instance of a large  
45 seismic event, levees constructed on liquefiable foundations are expected to experience large

1 deformations (in excess of 10 feet) under a moderate to large earthquake in the region. See  
 2 Appendix 3E, *Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies*, for more  
 3 detailed discussion. To reclaim land or rebuild levees after a catastrophic event due to climate  
 4 change or a seismic event would potentially create a substantial hazard to the public or the  
 5 environment through the release of hazardous materials or by other means during construction. In  
 6 the instance of levee failure causing flooding, inundation could result in the release of a range of  
 7 hazardous materials including, but not limited to, fuel, chemicals, fertilizers, and pesticides. A large  
 8 scale seismic event could also rupture gas and oil pipelines resulting in exposure to hazardous  
 9 materials. Thus, there would be a potential for adverse effects on the environment and public in the  
 10 case of a catastrophic event due to climate change or a seismic event.

11 **CEQA Conclusion:** Implementation of programs, policies, and projects under the No Action  
 12 Alternative in the study area would have the potential for significant impacts on the public or the  
 13 environment related to hazards and/or hazardous materials (e.g., through the inadvertent release of  
 14 fuels or lubricants during construction). However, these impacts would be smaller in scale and more  
 15 confined in geographic scope relative to the action alternatives. Projects implemented under the No  
 16 Action Alternative would require their own separate environmental compliance processes; would be  
 17 required to adhere to applicable federal, state, and local regulations; and would incorporate  
 18 applicable BMPs, environmental commitments, and/or mitigation intended to avoid, prevent, or  
 19 minimize hazardous spills and construction-related hazards and/or mitigate for such occurrences,  
 20 which would help ensure that these types of impacts would be less than significant.

### 21 **24.3.3.2 Alternative 1A—Dual Conveyance with Pipeline/Tunnel and** 22 **Intakes 1–5 (15,000 cfs; Operational Scenario A)**

#### 23 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the** 24 **Release of Hazardous Materials or by Other Means during Construction of the Water** 25 **Conveyance Facilities**

26 **NEPA Effects:** This effect describes and addresses, for the duration of construction of the water  
 27 conveyance facilities, potential hazards associated with the routine use of hazardous materials;  
 28 natural gas accumulation in tunnels; existing contaminants in soil, groundwater or sediment;  
 29 hazardous constituents present in RTM; infrastructure containing hazardous materials; and the  
 30 routine transport of hazardous materials.

#### 31 **Routine Use of Hazardous Materials**

32 As described in Chapter 3, *Description of Alternatives*, during construction of Alternative 1A, five  
 33 locations would be designated as fuel stations. Each fuel station would occupy approximately 2 acres  
 34 and would be located adjacent to a concrete batch plant; both the fuel station and the batch plant  
 35 would be temporary and would be in place only for the duration of construction. Fuel station  
 36 locations are shown in Figure 24-7 and in Figure M3-1 in the Mapbook Volume. Two fuel stations  
 37 would be established in currently rural areas on the northern end of the Alternative 1A water  
 38 conveyance alignment. One would be located less than 0.5 mile northwest of Intake 2, just east of SR  
 39 160 across the Sacramento River from Clarksburg, and the other would be located between Intakes  
 40 4 and 5, southeast of SR 160. In addition, two fuel stations would be located along the length of the  
 41 tunnel alignment (one on southeastern Tyler Island and one on northeastern Bacon Island), and one  
 42 fuel station would be located immediately southeast of Byron Tract Forebay near the intersection of  
 43 the Byron Highway and Mountain House Road. It is anticipated that equipment and vehicles would

1 be maintained in the field and at on-site maintenance facilities. Bulk fuel would be stored at fuel  
2 stations and would potentially pose the risk of vehicle fueling spills and leakage from above-ground  
3 storage tanks at fuel stations.

4 In addition to fuel use and bulk fuel storage, oils, lubricants, and other hazardous materials would be  
5 stored onsite and used in equipment, such as compressors, generators, pile drivers, cranes, forklifts,  
6 excavators, pumps, or soil compactors throughout the study area during construction. Spills and  
7 releases could occur during transfer and use of these materials in the field and over water or  
8 adjacent to waterways. Hazardous materials, including paints, solvents, and sealants, would be used  
9 in construction of water conveyance facilities features (e.g., intakes, pumping plants, conveyance  
10 piping). Fueling and transfer of oils, lubricants, and other materials would be performed on work  
11 barges and watercraft used for building temporary and permanent in-river facilities, such as intake  
12 structures, and could be spilled or otherwise released to the environment and result in a hazard.

13 Construction equipment maintenance is expected to be performed in the field and in central  
14 maintenance facilities operated by contractors during construction of the water conveyance  
15 facilities. While equipment could be maintained at any work area identified for this alternative, the  
16 highest risk of hazards related to maintenance activities would be anticipated to occur at those sites  
17 where the duration and intensity of construction activities would be greatest, including intake and  
18 intake pumping plant sites along the east bank of the Sacramento River, an intermediate forebay  
19 (and pumping plant) site west of South Stone Lake and east of the Sacramento River, and the site of  
20 Byron Tract Forebay adjacent to and south of Clifton Court Forebay. Construction equipment  
21 maintenance activities would also be expected to be performed at work areas related to main tunnel  
22 construction shaft sites on the northern Brannan-Andrus Island, southern Tyler Island, western  
23 Venice Island, eastern Bacon Island, and western Victoria Island. For a map of all permanent  
24 facilities and temporary work areas associated with this conveyance alignment, see Figure M3-1 in  
25 the Mapbook Volume. Equipment maintenance activities at these facilities would likely include  
26 rebuilding pumps or motors, maintaining equipment hydraulic systems, minor engine repairs and  
27 routine lubrication, and replacing worn parts. Spills and other accidental releases of degreasers,  
28 fuels, oils, or lubricants could result in minor, temporary hazards to workers immediately adjacent  
29 to these releases. However, because these chemicals would be used in small quantities by trained  
30 personnel, and because BMPs to minimize the potential for these types of accidents and to contain  
31 and remediate hazardous spills, should they occur, would be implemented, as set forth in Appendix  
32 3B, *Environmental Commitments, AMMs, and CMs*, it is unlikely that the general public or the  
33 environment would be adversely affected.

34 As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, SWPPPs, HMMPs, and  
35 SPCCPs would be developed and implemented by DWR as part of the construction process for  
36 Alternative 1A. The SPCCPs would minimize effects from spills of oil, oil-containing products, or  
37 other hazardous chemicals during construction and operation of the project. The plan would be  
38 comprehensive in that it would address actions used to prevent spills and specify actions that would  
39 be taken should any spills occur, including emergency notification procedures. BMPs to be  
40 implemented as part of the SPCCPs include, but would not be limited to, the following.

- 41 • Personnel will be trained in emergency response and spill containment techniques, and would  
42 also be made aware of the pollution control laws, rules, and regulations applicable to their work.
- 43 • When transferring oil or other hazardous materials from trucks to storage containers, absorbent  
44 pads, pillows, socks, booms or other spill containment material would be placed under the  
45 transfer area.

- 1       • Absorbent pads, pillows, socks, booms, and other spill containment materials would be  
2       maintained at the hazardous materials storage sites for use in the event of spills.
- 3       • Contaminated absorbent pads, pillows, socks, booms, and other spill containment materials  
4       would be placed in leak-proof sealed containers until transport to an appropriate disposal  
5       facility.
- 6       • In the event of a spill, personnel would identify and secure the source of the discharge and  
7       contain the discharge with sorbents, sandbags, or other material from spill kits. In addition,  
8       regulatory authorities (e.g., National Response Center) would be contacted if the spill threatens  
9       navigable waters of the United States or adjoining shorelines, as well as other response  
10      personnel.
- 11      • Equipment used in direct contact with water would be inspected daily to prevent the release of  
12      oil.
- 13      • Oil-absorbent booms would be used when equipment is used in or immediately adjacent to  
14      waters.
- 15      • All reserve fuel supplies would be stored only within the confines of a designated staging area.
- 16      • Fuel transfers would take place a minimum distance from exclusion/drainage areas and  
17      streams, and absorbent pads would be placed under the fuel transfer operation.
- 18      • Equipment would be refueled only in designated areas.
- 19      • Staging areas would be designed to contain contaminants such as oil, grease, and fuel products  
20      so that they do not drain toward receiving waters or storm drain inlets.
- 21      • All stationary equipment would be positioned over drip pans.

22      Containment and cleanup of spills from equipment storage, oil storage, fueling, and maintenance  
23      would be managed in accordance with the plans summarized below and presented in detail in  
24      Appendix 3B, *Environmental Commitments, AMMs, and CMs*.

25      The SWPPP objectives would be to: (1) identify pollutant sources associated with construction  
26      activities and operations that could affect the quality of stormwater; and (2) identify, construct, and  
27      implement stormwater pollution prevention measures to reduce pollutants in stormwater  
28      discharges during and after construction. It is anticipated that multiple SWPPPs would be prepared  
29      for the overall project construction, with a given SWPPP prepared to cover a particular water  
30      conveyance component (e.g., intermediate forebay) or groups of components (e.g., intakes).  
31      Generally, the SWPPP would include the provisions listed below.

- 32      • A description of potential stormwater pollutants from erosion.
- 33      • A description of the management of dredged sediments and hazardous materials present on site  
34      during construction (including vehicle and equipment fuels).
- 35      • Details of how the sediment and erosion control practices would comply with state and federal  
36      water quality regulations.
- 37      • A visual monitoring program and a chemical monitoring program for "non-visible" pollutants if  
38      the BMPs are breached.

1 BMPs in the SWPPPs would include the following measures.

- 2 ● Capture sediment via sedimentation and stormwater detention features.
- 3 ● Implement concrete and truck washout facilities and appropriately sized storage, treatment, and
- 4 disposal practices.
- 5 ● Clean or replace sanitation facilities (as necessary) and inspect regularly for leaks/spills.
- 6 ● Cover waste disposal containers during rain events and at the end of every day.
- 7 ● Store chemicals in watertight containers.
- 8 ● Reclaim or land-apply construction site dewatering discharges to the extent practicable, or use
- 9 for other construction purposes (e.g., dust control).
- 10 ● Implement appropriate treatment and disposal of construction site dewatering from
- 11 excavations to prevent discharges to surface waters.
- 12 ● Equipment and materials for cleanup of spills shall be available on site.
- 13 ● Spills and leaks shall be cleaned up immediately and disposed of properly.
- 14 ● Ensure that there are trained spill response personnel available.

15 The HMMPs would provide detailed information on the types of hazardous materials used or stored  
 16 at all sites associated with the water conveyance facilities (e.g., intake pumping plants, maintenance  
 17 facilities); phone numbers of city, county, state, and federal agencies; primary, secondary, and final  
 18 cleanup procedures; emergency-response procedures in case of a spill; and other applicable  
 19 information. The HMMPs would include measures to minimize the possible environmental impacts  
 20 associated with spills or releases of hazardous materials (e.g., solvents, paints) during routine  
 21 construction and operations and maintenance activities. These measures would include but not be  
 22 limited to those listed here (see Appendix 3B, *Environmental Commitments, AMMs, and CMs*, for  
 23 additional detail).

- 24 ● Fuel, oil, and other petroleum products would be stored only at designated sites.
- 25 ● Hazardous materials containment containers would be clearly labeled with the material's
- 26 identity, handling and safety instructions, and emergency contact information.
- 27 ● Storage and transfer of hazardous materials would not be allowed within 100 feet of streams or
- 28 sites known to contain sensitive biological resources except with the permission of Department
- 29 of Fish and Wildlife.
- 30 ● The accumulation and temporary storage of hazardous wastes would not exceed 90 days.
- 31 ● Soils contaminated by spills or cleaning wastes would be contained and removed to an approved
- 32 disposal site.
- 33 ● Hazardous waste generated at work sites, such as contaminated soil, would be segregated from
- 34 other construction spoils and properly handled, hauled, and disposed of at an approved disposal
- 35 facility by a licensed hazardous waste hauler in accordance with state and local regulations. The
- 36 contractor would obtain permits required for such disposal.
- 37 ● Emergency spill containment and cleanup kits would be located at the facility site. The contents
- 38 of the kit would be appropriate to the type and quantities of chemical or goods stored at the
- 39 facility.

1 Implementation of BMPs in these plans would reduce the potential risk of a release of stored fuels,  
2 oils, lubricants or other hazardous materials used during construction and construction equipment  
3 operation and maintenance.

#### 4 **Natural Gas Accumulation in Water Conveyance Tunnels**

5 Under Alternative 1A, deep water conveyance tunnels would be constructed. One tunnel would run  
6 from south of Scribner Road, east of the Sacramento River in Sacramento County and would run  
7 south to the intermediate forebay, south of the community of Hood and northwest of South Stone  
8 Lake. Another tunnel would reach from north of Lambert Road (west of South Stone Lake), crossing  
9 Pierson District, Grand Island, Brannan-Andrus Island, Tyler Island, Staten Island, Bouldin Island,  
10 Venice Island, Mandeville Island, Bacon Island, Woodward Island, Victoria Island, and Coney Island,  
11 before ending south of Clifton Court Forebay. For a map of the proposed tunnel alignment, see  
12 Figure M3-1 in the Mapbook Volume.

13 During construction, the potential to encounter gases, which could enter and accumulate to  
14 flammable or explosive concentrations in tunnel bores or other excavations, could exist. Were this to  
15 occur, it would be considered an adverse effect. These gases could include methane generated by  
16 peat and organic soils or other natural gases, which could seep from deep natural gas reservoirs  
17 either through improperly sealed boreholes or natural conduits such as faults and fractures. As  
18 previously described, the thickness of peat and organic soils increases to the west across the Delta,  
19 and approximately 3,400 oil and gas wells are located throughout the study area. Engineering  
20 reconnaissance indicates six active and 19 inactive oil or gas wells present within the construction  
21 footprint for the Alternative 1A water conveyance alignment (California Department of Water  
22 Resources 2010a:13-1); oil and gas wells along the water conveyance facilities alignments are  
23 shown in Figure 24-5. Gas fields in the United States are typically located at depths greater than  
24 3,000 feet (U.S. Energy Information Administration 2012). Because the tunnels would be  
25 approximately 150–160 feet below ground, it is unlikely that a gas field would be encountered  
26 during tunneling. However, an evaluation of how these gas fields could affect the constructability of  
27 the tunnels would be prepared during the geotechnical investigations performed in the design phase  
28 of the water conveyance facilities. For water conveyance facilities construction under Alternative  
29 1A, the water conveyance tunnels may receive a Cal-OSHA classification of “gassy or  
30 extrahazardous” due to the presence of natural gas deposits and natural gas wells along the  
31 alignment. If the tunnels receive a “gassy or extrahazardous” classification, specialized tunneling  
32 equipment, which would need to be approved by the Mine Safety and Health Administration  
33 (MSHA), would be required to prevent explosions during tunneling, as would gas detection  
34 equipment on the tunnel boring machines, an automatic shutoff of the equipment if gas were  
35 detected, and fireproof construction equipment. In addition, the contractor would be required to  
36 follow gas monitoring and fire prevention requirements mandated by Cal-OSHA based on the tunnel  
37 gas classification in accordance with The Tunnel Safety Orders set forth in the California Code of  
38 Regulations (Title 8, Division 1, Chapter 4, Subchapter 20, Article 8, “Tunnel Classifications” [see  
39 Section 24.2.2.13, *California Occupational Safety and Health Act*]). The tunnel ventilation system  
40 would include steel ducts capable of reversing the direction of air in order to help control potential  
41 fires in the tunnel. Tunnels would be ventilated according to Cal-OSHA requirements. Cal-OSHA  
42 requires providing at least 200 cubic feet per minute (fpm) of fresh air per person working  
43 underground. Additionally, a minimum air velocity of 60 fpm is required to dilute any contaminated  
44 gas present within the tunnel. Further, ventilation hardware would comply with Cal-OSHA  
45 requirements. The hardware would include steel ducts and be capable of reversing the direction of

1 air flow (for fire control within the tunnel). Adherence to these regulations would reduce the  
2 potential for hazards related to accumulation of natural gas in tunnels. Further, the construction  
3 contractor would be required to prepare an emergency plan prior to construction of the tunnels  
4 (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9, “Emergency Plan and Precautions”). This  
5 plan would outline the duties and responsibilities of all employees in the event of a fire, explosion or  
6 other emergency. The plan would include maps, evacuation plans, rescue procedures,  
7 communication protocol, and check-in/check-out procedures. Copies of the plan would be given to  
8 the local fire or designated off-site rescue teams and Cal/OSHA.

### 9 **Existing Contaminants in Soil, Groundwater, or Sediment**

10 There may be contaminated areas within the study area that have not been previously identified  
11 because of inadequate or missing data or poor record keeping. During construction of Alternative  
12 1A, contaminated soils, sediments and groundwater may be encountered where historical releases  
13 have occurred, such as former storage and distribution facility locations.

14 The lateral and vertical extent of any historical soil-, sediment- or water-based contamination within  
15 or near the construction footprint is unknown. Although, where it exists, soil contamination is, in  
16 general, likely to be highly localized, while groundwater contamination could have migrated  
17 substantial distances and therefore be more widespread than soil contamination—exceptions to this  
18 would include potential lead contamination of soils along SR 160 sections where realignment would  
19 occur (see Chapter 3, *Description of Alternatives*, for a description of SR 160 realignment and  
20 Appendix 24B, *2010 Initial Site Assessment*, for a description of potential lead contamination in  
21 proximity to SR 160). Where realignment of SR 160 would occur, and Aerially Deposited Lead (ADL)  
22 site investigation would be required to determine if hazardous soils exist and what actions, if any,  
23 would be required prior to and/or during construction. In addition, as described in the 2010 ISA,  
24 hazardous levels of lead and chromium are known to exist in the yellow paint of the traffic stripes on  
25 SR 160, which will be ground off where road realignment would occur under this alternative. These  
26 grindings, which would consist of the roadway material and painted traffic stripes, would be  
27 removed and disposed of in accordance with Caltrans Standard Special Provision 15-305 (Residue  
28 Containing High Lead Concentration Paints); Caltrans Standard Special Provision 15-305 requires a  
29 Lead Compliance Plan. Further, the 2010 ISA noted that hazardous chemicals exist in the wood posts  
30 associated with the metal beam guard railings along SR 160 sections where realignment would  
31 occur. As such, if these wood posts are removed, they will be disposed of in accordance with Caltrans  
32 Standard Special Provision 14-010 (Treated Wood Waste). Additionally, because the proposed  
33 project will disturb soils in the immediate proximity of SR 160 where the realignments would be  
34 required, Caltrans would require a site investigation, which may include soil sampling, and site  
35 investigation report for Caltrans review and approval. Project proponents would adhere to Caltrans’  
36 recommendations in order to avoid any adverse effects on the environment related to lead  
37 contamination at SR 160 realignment sites.

38 Locations of known oil and gas processing facilities (Figure 24-1) are considered a separate category  
39 of SOC due to the potential for spills and leaks at these locations. The lateral and vertical extent of  
40 any existing contamination that may be present at these sites is unknown. The number of SOCs may  
41 change during right-of-way evaluation, land acquisition and preconstruction site-clearance  
42 investigations or during construction. Additional SOCs may be identified during these activities, and  
43 currently identified SOCs may be determined innocuous after site-specific field investigation and  
44 testing.

1 It is likely that contaminated sediments (e.g., persistent pesticide- and mercury-contaminated  
2 sediments) would be resuspended during sediment-disturbing activities related to in-river  
3 construction activities (e.g., cofferdam construction at intake sites). However, concentrations of  
4 potential contaminants in the sediments where in-river construction activities would be taking place  
5 are not known; therefore, the associated risk cannot be identified. In general, sediment-bound  
6 pesticide concentrations in rivers and estuaries vary by season (with rain and the seasonal variation  
7 in pesticide applications) and are episodic; pesticide concentrations in sediment are generally  
8 higher during rainy season at the onset of winter rains (Bergamaschi et al. 2007). One study  
9 suggests that the mercury concentration in suspended sediment at Freeport, just upstream of the  
10 intake locations, is less than 10 ng/l, below the recommended criterion of 50 ng/l (Domagalski  
11 2001). Also, mobilization of potentially contaminated sediments would be directly related to levels  
12 of turbidity and suspended sediments resulting from construction activities. Although resulting  
13 turbidity has not been modeled, it is anticipated to be low given the permit requirements for  
14 controls stipulating that dredging activities be conducted and monitored such that turbidity not  
15 increase in receiving waters, measured 300 feet downstream or that silt curtains be used to control  
16 turbidity and reduce the associated mobilization of potentially contaminated sediments.

17 Mobilization of potentially contaminated sediments is unlikely to be a hazard concern for  
18 construction workers because it is not expected that workers would be in direct contact with  
19 sediments during in-river construction activities. Similarly, resuspension of potentially  
20 contaminated sediment is unlikely to pose a hazard to the general public or the environment  
21 because it would be confined to a relatively small area during construction and would be temporary  
22 (occurring during in-river work and potentially for a few hours following cessation of in-river  
23 construction activities). Further, as described in Appendix 3B, *Environmental Commitments, AMMs,*  
24 *and CMs*, for any dredging activity, the project proponents would prepare and implement a site-  
25 specific pre-dredge sampling and analysis plan (SAP), which would be developed and submitted by  
26 the contractors required per standard DWR contract specifications Section 01570. As part of the  
27 SAP, prior to any dredging activities, sediment would be evaluated for contaminants that may  
28 impact water quality from the following discharge routes.

- 29 • In-stream discharges during dredging.
- 30 • Direct exposure to contaminants in the material through ingestion, inhalation or dermal  
31 exposure.
- 32 • Effluent (return flow) discharge from an upland disposal site.
- 33 • Leachate from upland dredge material disposal that may affect groundwater or surface water.

34 Additionally, BMPs, including those listed below, would be implemented during in-river  
35 construction activities to ensure that disturbed sediment was contained, thus reducing the risk of  
36 sediment dispersal away from the immediate area (see Appendix 3B, *Environmental Commitments,*  
37 *AMMs, and CMs*).

- 38 • Conduct dredging activities in a manner that will not cause turbidity increases in the receiving  
39 water, as measured in surface waters 300 feet down-current from the project, to exceed the  
40 Basin Plan objectives beyond an averaging period approved by the RWQCB and Department of  
41 Fish and Wildlife.
- 42 • If turbid conditions generated during dredging exceed the agreed-upon implementation  
43 requirements for compliance with the Basin Plan objectives, silt curtains will be utilized to  
44 control turbidity.

- 1 • Conduct in-river construction activities during low-flow periods to the extent practicable.

2 To the extent feasible, action alternative design would minimize the need to acquire or traverse  
3 areas where the presence of hazardous materials is suspected or has been verified. In addition,  
4 under Mitigation Measure HAZ-1a (described below), remediation and/or containment prior to  
5 discharge or disposal of contaminated soil and groundwater, as identified in preconstruction  
6 surveys, would be performed prior to construction of the proposed water conveyance facilities at  
7 known contaminated sites or in areas where contamination is suspected.

## 8 **Constituents in Reusable Tunnel Material**

9 RTM would consist of materials excavated from the tunnel bore, which would be advanced at a  
10 depth of approximately 100 feet below ground surface (bgs) and 160 feet bgs under Delta water  
11 channels. As described in Section 24.3.1.3, *Construction Effects*, biodegradable soil conditioners or  
12 additives would be added during tunneling activities to facilitate the process, and RTM would be  
13 transported from the tunnel through the launching shaft to the surface and then by conveyor belt to  
14 RTM work areas. At the RTM areas, decant liquids from the RTM would be leached, collected and  
15 evaporated. RTM areas would be located just north of Scribner Road, east of the Sacramento River,  
16 on northern Brannan-Andrus Island, on southeastern Tyler Island, on eastern Bacon Island, and on  
17 northwestern Victoria Island. For a map of proposed RTM areas, see Figure M3-1 in the Mapbook  
18 Volume.

19 As described in Chapter 9, *Geology and Seismicity*, the geologic materials encountered during  
20 tunneling are expected to comprise alluvial sediments consisting of a mixture of clay, silt, sand,  
21 gravel and minor amounts of organic matter, all deposited prior to the arrival of settlers to  
22 California and subsequent mining, agricultural and urban land uses that have produced potential  
23 contaminants of concern, as discussed above. Approximately 25 million cubic yards of RTM are  
24 expected to be generated during construction of the Alternative 1A water conveyance facilities.

25 It is anticipated that all tunnel boring additives would be non-toxic and biodegradable. Regardless,  
26 before the RTM could be re-used or returned to the environment, it would be managed to comply  
27 with NPDES permit requirements, and at a minimum would go through a drying/water-solids  
28 separation process and a possible physical or chemical treatment following chemical  
29 characterization (including RTM decant liquid). Depending on the composition of the RTM and type  
30 of conditioning agents used, there would be many options for management of the RTM prior to  
31 reuse. Management could be done in several ways, including chemical flocculation,  
32 settlement/sedimentation, handling at a treatment plant, chemical conditioning or controlled  
33 storage. The method of controlled storage (described in Appendix 3C, *Construction Assumptions for*  
34 *Water Conveyance Facilities*), similar to landfill storage, would be the method with the broadest  
35 impacts because a designated area large enough to store the RTM may be required permanently. If  
36 controlled storage is necessary, the RTM would be deposited within designated RTM storage areas.  
37 To ensure that the RTM is contained within the designated area, a retaining dike would be built  
38 around the perimeter of the RTM area. RTM ponds would aid in RTM management and facilitate the  
39 dewatering. Several of the ponds would be designated as leachate ponds. The leachate would be  
40 pumped from the drainage system to the leachate ponds for possible additional treatment. To  
41 ensure that underlying groundwater is not contaminated, the invert of the RTM pond would be a  
42 minimum of 5 feet above the seasonal high groundwater table, and an impervious liner would be  
43 placed on the invert of the RTM pond and along the interior slopes of the berms to prevent any  
44 contact between the RTM and the groundwater.

1 Prior to reuse, the RTM would undergo chemical characterization. RTM would be tested in  
2 accordance with the methods outlined in EPA publication SW-846, as required by state and federal  
3 regulations prior to reuse (e.g., RTM in levee reinforcement) or disposal. Similarly, RTM decant  
4 liquid would also require testing prior to discharge to meet NPDES or Construction General Permit  
5 (Order 2010-0014-DWQ) requirements. As described in Section 24.3.1.3, *Construction Effects*,  
6 preliminary lab tests on an RTM-like substance (native soils mixed with representative soil  
7 conditioners) indicate that RTM could be reused to strengthen select Delta levees, for habitat  
8 restoration, fill on subsiding islands, or as structural fill for construction of the proposed water  
9 conveyance facilities (URS 2014).

10 Should constituents in RTM or associated decant liquid exceed discharge limits, these tunneling  
11 byproducts would be treated to comply with permit requirements. Decant liquids from RTM may  
12 require additional chemical or physical treatment, such as flocculent addition to precipitate  
13 suspended sediment, prior to discharging to surface water.

14 As part of a Material Reuse Plan (MRP), prior to construction, draining, and chemical  
15 characterization of RTM, the project proponents would identify sites for reusing this material to the  
16 greatest extent feasible, in connection with construction activities, habitat restoration activities, as  
17 well as for potential beneficial uses associated with flood protection and management of  
18 groundwater levels within the Plan Area. The project proponents will undertake a thorough  
19 investigation to identify sites for the appropriate reuse of RTM, and will consult relevant parties,  
20 such as landowners, reclamation districts, flood protection agencies, state agencies with jurisdiction  
21 in the Delta, and counties, in developing site-specific material reuse plans, as described in Appendix  
22 3B, *Environmental Commitments, AMMs, and CMs*. Following removal of RTM from the temporary  
23 RTM areas, stockpiled topsoil would be reapplied, and disturbed areas would be returned, to the  
24 extent feasible, to preconstruction conditions. In some instances it may be infeasible to transport  
25 and reuse RTM due to factors such as distance and cost, and/or any environmental effects  
26 associated with transport (e.g., unacceptable levels of diesel emissions). In such instances, RTM sites  
27 would be evaluated for the potential to reapply topsoil over the RTM and to continue or  
28 recommence agricultural activities. If, in consultation with landowners and any other interested  
29 parties, project proponents determine that continued use of the land for agricultural or habitat  
30 purposes would be infeasible, the potential for other productive uses of the land would be examined,  
31 as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*.

## 32 **Electrical Transmission Lines**

33 There are 11 overhead power/electrical transmission lines along the proposed Alternative 1A water  
34 conveyance facilities alignment (Table 24-3 and Figure 24-6). Disturbance of this infrastructure  
35 during construction activities that employ high-profile equipment, such as cranes, could result in  
36 safety hazards for construction workers in the immediate vicinity of an energized line. The most  
37 significant risk of injury from any power line is the danger of electrical contact between an object on  
38 the ground and an energized conductor. Generally, there is less risk of contact with higher voltage  
39 lines as opposed to low-voltage lines because of the height of the conductors. When work is  
40 performed near transmission lines, electrical contact can occur even if direct physical contact is not  
41 made, because electricity can arc across an air gap. DWR would be required to comply with Title 8  
42 CCR, Section 2300 (“Low Voltage Electrical Safety Orders”) and Section 2700 (“High Voltage  
43 Electrical Safety Orders”) so that worker and public safety is ensured during work on or in  
44 immediate proximity to low- and high-voltage transmission lines. Other hazards associated with

1 electrical transmission lines include potential health risks exposure to EMFs. These potential effects  
 2 are described and assessed in Chapter 25, *Public Health*.

3 **Table 24-3. Number and Type of Pipelines and Electrical Transmission Lines Crossing All Alignments**

Utility Operator and Type	Pipeline/ Tunnel Option (Alt. 1A, 2A, 3, 5, 6A, 7, and 8)	Modified Pipeline Tunnel Option (Alt. 4, 4A, 2D, and 5A)	East Option (Alt. 1B, 2B, and 6B)	West Option (Alt. 1C, 2C, and 6C)	Separate Corridor Option (Alt. 9)
<b>Electrical Transmission Lines</b>					
Western Area Power Administration 69 kV	1	1	1	1	0
Western Area Power Administration 230 kV	2	2	2	1	2
Pacific Gas & Electric 115 kV	4	2	2	3	2
Pacific Gas & Electric 230 kV	0	0	4	2	0
Pacific Gas & Electric 500 kV	3	3	3	4	0
Transmission Agency of Northern California/ Western Area Power Administration for the California-Oregon Transmission Project 500 kV	1	1	1	1	1
Sacramento Municipal Utility District 230 kV	0	3	0	0	0
<b>Pipelines</b>					
Pacific Gas & Electric (size unspecified) Natural Gas	7	6	5	7	0
Chevron Texaco (7" diameter) Petroleum Product	1	1	1	1	0
Chevron Texaco (9" diameter) Petroleum Product	1	1	1	1	0
Chevron Texaco (18" diameter) Petroleum Product	1	0	1	0	0
Kinder Morgan Pacific Region (10") Petroleum Product	1	1	1	1	1

kV = kilovolts.

4

5 **Infrastructure Containing Hazardous Materials**

6 Infrastructure in the study area containing hazardous materials (e.g., natural gas pipelines) could  
 7 pose hazards to the environment and the public if disturbed by construction activities. As described  
 8 in Section 24.1.2, *Potential Hazardous Materials in the Study Area*, pipelines carrying fluids with  
 9 hazardous characteristics (e.g., petroleum products) cross the Alternative 1A conveyance alignment  
 10 and construction footprint (Figure 24-3). The number of regional pipeline crossings within the  
 11 construction disturbance footprint of the all conveyance alternatives is provided in Table 24-3.  
 12 Natural gas pipelines cross the conveyance alignment between Intakes 1 and 2 under a proposed  
 13 RTM area and concrete batch plant and fuel station area; near a main tunnel construction shaft and  
 14 under a proposed RTM area near the southeastern end of Tyler Island; and near proposed  
 15 temporary and permanent transmission lines, a proposed RTM area, the tunnel, and a proposed  
 16 barge unloading facility on Bacon Island. Other product pipelines cross the alignment at the north  
 17 end of Woodward Island under the proposed tunnel and permanent transmission line, and along the  
 18 southwestern side of the proposed Byron Tract Forebay and nearby spoil area. Further, hazardous  
 19 materials storage vessels, such as tanks or other bulk containers used for processing, storage and  
 20 distribution of fuels, pesticides or other hazardous materials may be present in the Alternative 1A

1 water conveyance facilities construction footprint. Active and inactive oil wells are present  
2 throughout the Delta and their locations are shown in Figure 24-5. Several active wells are  
3 proximate to the conveyance alignment where it crosses Brannan-Andrus and Tyler Islands.

4 In addition, certain residential, agricultural, recreational (e.g., pools and docks) and other types of  
5 structures (e.g., power/utility structures, bridges, and other types of infrastructure) within the  
6 Alternative 1A water conveyance facilities footprint would need to be removed. Approximately 204  
7 permanent structures would be removed or relocated within the water conveyance facility footprint  
8 under this alternative. This includes approximately 59 residential buildings; 15 recreational  
9 structures; 120 storage and agricultural support structures; and 10 other types of structures. One  
10 fire station in the community of Hood would also be affected. Most of these existing structures fall  
11 within the physical footprints of the intake facilities and their associated conveyance pipelines.  
12 These structures may contain hazardous materials in the form of building materials containing  
13 asbestos or lead-based paint, stored liquid paints and solvents, and household or industrial-strength  
14 maintenance chemicals and cleaners. Asbestos-containing material is regulated both as a hazardous  
15 air pollutant under the Clean Air Act (Chapter 22, *Air Quality and Greenhouse Gases*) and as a  
16 potential worker safety hazard by Cal-OSHA (see Section 24.2.2.13, *California Occupational Safety  
17 and Health Act*). Were these types of hazardous materials to be encountered during structure  
18 demolition, the potential for their release and the consequent adverse effects on the public,  
19 construction workers, and the environment would exist. To prevent adverse effects, DWR would  
20 implement Mitigation Measure HAZ-1b, which would require that DWR coordinate with existing  
21 property owners to identify existing potentially hazardous infrastructure and infrastructure  
22 containing potentially hazardous materials, and that DWR perform pre-demolition surveys in order  
23 to identify and characterize hazardous materials to ensure the safe and appropriate handling and  
24 disposal of these materials.

25 There are seven natural gas pipelines, four petroleum product pipelines, 19 known inactive and six  
26 active oil or gas wells within the construction footprint of the proposed Alternative 1A water  
27 conveyance alignment (Table 24-3, and Figures 24-3 and 24-5). In addition to the regional pipelines  
28 in the study area, there are networks of minor oil and gas gathering pipelines, which connect  
29 individual oil or gas wells to small storage and preliminary processing facilities operated by the  
30 different oil and gas companies working in the study area. Disturbance of this infrastructure during  
31 construction of the water conveyance facilities could result in hazards to the environment as well as  
32 physical and chemical hazards to the construction workers or the nearby public due to fires,  
33 explosions, and release of natural gas or petroleum products. The precise location of pipelines  
34 within a tunnel section would be identified prior to construction to avoid conflicts with shaft  
35 construction and disposal of RTM. Studies will be done prior to construction to identify the  
36 minimum allowable distance between existing gas wells and tunnel excavation. Abandoned wells  
37 would be tested to confirm that they have been abandoned according to DOGGR well abandonment  
38 requirements. Those wells not abandoned according to these requirements will be improved. In  
39 addition, to avoid the potential conflicts with shaft construction and disposal areas, the utility and  
40 infrastructure relocation will be coordinated with local agencies and owners. The potential for  
41 disturbing oil and gas fields during excavation or tunneling activities is minimal because these fields  
42 are typically located at depths greater than 3,000 feet (U.S. Energy Information Administration  
43 2012). Effects would be more likely to occur if utilities were not carefully surveyed prior to  
44 construction, including contacting the local utility service providers. California Government Code  
45 Sections 4216–4216.9 require that anyone planning to excavate contact the appropriate regional  
46 notification center at least 2 working days (but not more than 14 calendar days) before beginning to

1 excavate. Implementation of pre-construction surveys, and then utility avoidance or relocation if  
2 necessary, would minimize any potential disruption and hazardous effects due to disruption.  
3 Mitigation Measures UT-6a: Verify locations of utility infrastructure, and UT-6c: Relocate utility  
4 infrastructure in a way that avoids or minimizes any effect on worker and public health and safety  
5 (described in Chapter 20, *Public Services and Utilities*) address these effects.

### 6 **Routine Transport of Hazardous Materials via Trucks, Trains, and Ships**

7 Generally, the transportation of hazardous materials via trucks, trains and ships poses potential  
8 risks associated with the accidental release of these materials to the environment. Alternative 1A  
9 would require a heavy volume of materials to be hauled to the construction work areas, increasing  
10 the amount of trucks using the transportation system in the study area. Rerouting vehicular traffic  
11 carrying hazardous materials during construction of the water conveyance facilities could increase  
12 the risk of accidental release due to inferior road quality or lack of driver familiarity with the  
13 modified routes. This includes the risk of release of hazardous products or wastes being transported  
14 routinely or specifically for construction of the water conveyance facilities, and the corresponding  
15 risk of release of fuels (gasoline and diesel) from vehicular accidents. Three designated hazardous  
16 materials transportation routes cross the Alternative 1A alignment—State Highways 4 and 12, and  
17 Byron Highway (Figure 24-2 and Table 24-4). It is not anticipated that traffic on any of these  
18 highways will need to be rerouted. Routes anticipated to be affected during construction of the  
19 water conveyance facilities are described in Chapter 19, *Transportation*. As described in Chapter 19,  
20 *Transportation*, under Mitigation Measure TRANS-1a, site-specific construction traffic management  
21 plans, taking into account land (including rail) and marine hazardous materials transportation,  
22 would be prepared and implemented prior to initiation of water conveyance facilities construction.  
23 Mitigation Measure TRANS-1a includes stipulations to avoid or reduce potential circulation effects,  
24 such as such as providing signage (including signs warning of roadway surface conditions such as  
25 loose gravel), barricades, temporary traffic signals/signage to slow or detour traffic, and flag people  
26 around construction work zones; notifying the public, including schools and emergency service  
27 providers of construction activities that could affect transportation; providing alternate access  
28 routes, if necessary, to maintain continual circulation in and around construction zones; and  
29 requiring direct haulers to pull over in the event of an emergency. Many of these traffic management  
30 BMPs (e.g., warning signage and temporary traffic signals) are roadway safety measures which  
31 would indirectly minimize the potential for accidents involving vehicles transporting hazardous  
32 materials routinely or specifically for construction of the water conveyance facilities, and the  
33 corresponding risk of release of fuels (gasoline and diesel) from vehicular accidents.

1 **Table 24-4. Number and Type of Designated Hazardous Materials Routes and Railroads Crossing**  
 2 **Water Conveyance Facilities Alignments**

Route or Rail	Pipeline/ Tunnel Option (Alt. 1A, 2A, 3, 5, 6A, 7, and 8)	Modified Pipeline Tunnel Option (Alt. 4, 4A, 2D, and 5A)	East Option (Alt. 1B, 2B, and 6B)	West Option (Alt. 1C, 2C, and 6C)	Separate Corridor Option (Alt. 9)
<b>Designated Hazardous Materials Routes</b>					
State Highway 4	1	1	1	1	1
State Highway 12	1	1	1	1	0
Byron Highway	1	1	0	1	0
<b>Railroads</b>					
Union Pacific Railroad	2	2	2	2	0
BNSF Railroad	1	1	1	1	1
Abandoned Railroad	0	0	0	1	0

3

4 As described in Chapter 19, *Transportation*, shipping routes to ports in West Sacramento and  
 5 Stockton are unlikely to be affected by barge traffic transporting equipment and materials for water  
 6 conveyance facilities construction. However, barges supporting water conveyance facilities  
 7 construction may also transport hazardous materials such as fuels and lubricants or other  
 8 chemicals. The potential exists for accidental release of hazardous materials from project-related  
 9 barges. To avoid effects on the environment related to this issue, BMPs implemented as part of a  
 10 Barge Operations Plan (for detail see Appendix 3B, *Environmental Commitments, AMMs, and CMs*),  
 11 including the following, would avoid and/or minimize this potential adverse effect.

- 12 ● All tugboats operating at the intake construction sites and the barge landings will keep an oil  
 13 spill containment kit and spill prevention and response plan on-board.
- 14 ● In the event of a fuel spill, report immediately to the California Department of Fish and Wildlife  
 15 Office of Spills Prevention and Response: 800-852-7550 or 800-OILS-911 (800-645-7911).
- 16 ● When transporting loose materials (e.g., sand, aggregate), barges will use deck walls or other  
 17 features to prevent loose materials from blowing or washing off of the deck.

18 Finally, the proposed Alternative 1A conveyance would cross under the existing BNSF/Amtrak San  
 19 Joaquin line between Bacon Island and Woodward Island. Maintaining freight and passenger service  
 20 on the BNSF line is included in the project design, and the effect of this crossing would be minimal to  
 21 nonexistent because the proposed conveyance would traverse the railroad in a deep bore tunnel.  
 22 The UPRR Tracy Subdivision (branch line) runs parallel to Byron Highway, between the highway  
 23 and the proposed new forebay adjacent to the existing Clifton Court Forebay. The construction of  
 24 the new forebay is unlikely to disrupt rail service because much of this line has not been in service  
 25 recently. The UPRR may return it to freight service in the future. Any potential effects on rail traffic  
 26 during construction would be reduced with implementation of Mitigation Measure TRANS-1a, which  
 27 would include stipulations to coordinate with rail providers to develop alternative interim  
 28 transportation modes (e.g., trucks or buses) that could be used to provide freight and/or passenger  
 29 service during any longer term railroad closures and daily construction time windows during which  
 30 construction would be restricted or rail operations would need to be suspended for any activity

1 within railroad rights of way. This would minimize the potential risk of release of hazardous  
2 materials being transported via these railways (see Chapter 19, *Transportation*, for a description).

3 In summary, during construction of the water conveyance facilities, the potential would exist for  
4 direct effects on construction personnel, the public and/or the environment associated with a  
5 variety of potentially hazardous conditions because of the intensity of construction activities at the  
6 north Delta intakes, forebays, conveyance pipelines, and tunnels, and the hazardous materials that  
7 would be used in these areas. Many of these activities would occur in close proximity to the towns of  
8 Hood and Courtland, and would involve multiple years of use of hazardous construction materials.  
9 Additionally, large-scale construction activities involving the use of hazardous materials would be  
10 located in and near water bodies. Potential hazards include the routine transport, use or disposal of  
11 hazardous materials; natural gas accumulation in water conveyance tunnels; the inadvertent release  
12 of existing contaminants in soil and groundwater, or hazardous materials in existing infrastructure  
13 to be removed; disturbance of electrical transmission lines; and hazardous constituents present in  
14 RTM. Additionally, there is the potential for the construction of the water conveyance facilities to  
15 indirectly result in the release of hazardous materials through the disruption of existing road, rail, or  
16 river hazardous materials transport routes because construction would occur in the vicinity of three  
17 hazardous material transport routes, three railroad corridors, and waterways with barge traffic and  
18 would require construction traffic that could disrupt these routes. Were any of these potential  
19 hazards to occur, the effect would be considered adverse because it would potentially result in  
20 direct exposure of the public (including construction personnel), and surface water and  
21 groundwater to physical and/or chemical hazards. Mitigation Measures HAZ-1a and HAZ-1b, UT-6a  
22 and UT-6c (described in Chapter 20, *Public Services and Utilities*) and TRANS-1a (described in  
23 Chapter 19, *Transportation*), combined with the previously described environmental commitments,  
24 are available to address these effects. Therefore, there would be no adverse effects.

25 **CEQA Conclusion:** During construction of the water conveyance facilities, the potential would exist  
26 for direct impacts on construction personnel, the public, and/or the environment associated with a  
27 variety of hazardous physical or chemical conditions. Such conditions may arise as a result of the  
28 intensity and duration of construction activities at the north Delta intakes, forebays, conveyance  
29 pipelines, and tunnels and the hazardous materials that would be needed in these areas during  
30 construction. Potential hazards include the routine use of hazardous materials (as defined by Title  
31 22 of the California Code of Regulations, Division 4.5); natural gas accumulation in water  
32 conveyance tunnels; the inadvertent release of existing contaminants in soil and groundwater, or  
33 hazardous materials in existing infrastructure to be removed; disturbance of electrical transmission  
34 lines; and hazardous constituents present in RTM. Many of these physical and chemical hazardous  
35 conditions would occur in close proximity to the towns of Hood and Courtland during construction  
36 of the north Delta intakes and the intermediate forebay. Additionally, the potential would exist for  
37 the construction of the water conveyance facilities to indirectly result in the release of hazardous  
38 materials through the disruption of existing road, rail, or river hazardous materials transport routes  
39 because construction would occur in the vicinity of three hazardous material transport routes, three  
40 railroad corridors, and waterways with barge traffic and would require construction traffic that  
41 could disrupt these routes. For these reasons, this is considered a significant impact. However, with  
42 the implementation of the previously described environmental commitments (e.g., SWPPPs, HMMPs,  
43 SPCCPs, SAPs, and a Barge Operations Plan) and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a  
44 and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in  
45 Chapter 19, *Transportation*), construction of the water conveyance facilities would not create a

1 substantial hazard to the public or the environment through the routine transport, use, or disposal  
2 of hazardous materials or the upset/accidental release of these materials.

3 The severity of this impact would be reduced with the implementation of these environmental  
4 commitments and mitigation measures by identifying and describing potential sources of hazardous  
5 materials so that releases can be avoided and materials can be properly handled; detailing practices  
6 to monitor pollutants and control erosion so that appropriate measures are taken; implementing  
7 onsite features to minimize the potential for hazardous materials to be released to the environment  
8 or surface waters; minimizing risk associated with the relocation of utility infrastructure; and  
9 coordinating the transport of hazardous materials to reduce the risk of spills. Accordingly, these  
10 impacts would be less than significant.

11 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
12 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
13 **Construction Footprint, and Remediate and/or Contain Contamination**

14 Project proponents will identify potential areas of hazardous materials and remediate and/or  
15 contain contamination in order to reduce the likelihood of hazardous materials being released  
16 into the environment. The project proponents will perform preconstruction hazardous waste  
17 investigations at properties to be acquired for construction associated with the project. Areas to  
18 be excavated as part of construction (e.g., for water conveyance facilities, shaft locations,  
19 concrete batch plants, intake locations, RTM areas, staging areas, forebays, borrow and spoil  
20 sites, barge unloading, restoration activities, and other appurtenant facilities) where historical  
21 contamination has been identified (e.g., SOCs) or where contamination is suspected (e.g., as  
22 evidenced by soil discoloration, odors, differences in soil properties, abandoned USTs) will  
23 undergo soil and/or groundwater testing at a certified laboratory provided that existing data is  
24 not available to characterize the nature and concentration of the contamination. Where  
25 concentrations of hazardous constituents, such as fuel, solvents or pesticides in soil or  
26 groundwater exceed applicable federal or state thresholds contaminated areas will be avoided  
27 or soil and/or groundwater removed from the contaminated area will be remediated and  
28 contained in compliance with applicable state and federal laws and regulations. If hazardous  
29 materials are encountered, consultation with the regional DTSC office will be required to  
30 establish which permit and subsequent action will be required to appropriately handle those  
31 hazardous materials. Groundwater removed with the dewatering system would be treated, as  
32 necessary, and discharged to surface waters under an NPDES permit (see Chapter 8, *Water*  
33 *Quality*).

34 Implementation of this mitigation measure will result in the avoidance, successful remediation  
35 or containment of all known or suspected contaminated areas, as applicable, within the  
36 construction footprint, which would prevent the release of hazardous materials from these  
37 areas into the environment.

38 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
39 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
40 **Dispose of Them in Accordance with Applicable Regulations**

41 Project proponents will perform surveys and characterize and dispose of hazardous materials in  
42 order to reduce the likelihood that hazardous materials are released into the environment.  
43 Where demolition of existing structures is necessary, measures will be implemented to ensure

1 hazards are avoided or minimized and that the release of hazardous materials, such as residual  
2 fuel in underground fuel storage tanks, or lead-based paint or asbestos-containing materials in  
3 buildings, is avoided. These measures will include the following practices.

- 4 • Perform pre-demolition surveys to identify all potentially hazardous materials, including  
5 asbestos-containing material and lead-based paint.
- 6 • Coordinate with owners of property to be acquired by project proponents to help identify  
7 potentially hazardous infrastructure and/or infrastructure containing potentially hazardous  
8 materials.
- 9 • Characterize and separate hazardous materials from structures before demolition and  
10 ensure that such materials are disposed of at an approved disposal site according to  
11 applicable regulations.
- 12 • Remove underground fuel storage tanks and contents to a licensed disposal site where the  
13 tanks will be scraped and the contents disposed of in accordance with applicable  
14 regulations.
- 15 • Disposal of materials containing PCBs will comply with all applicable regulations, codes, and  
16 ordinances. Disposal of large quantities of PCB waste will occur at incinerators approved for  
17 burning of PCB-containing waste.
- 18 • Implement proper handling and disposal procedures for potentially hazardous materials,  
19 such as solvents and household or industrial-strength maintenance chemicals and cleaners  
20 in buildings to be demolished.
- 21 • As applicable, a Cal-OSHA-certified asbestos and lead-based paint contractor will prepare a  
22 site-specific asbestos and/or lead hazard control plan with recommendations for the  
23 containment of asbestos and/or lead-based paint materials during demolition activities, for  
24 appropriate disposal methods and locations, and for protective clothing and gear for  
25 abatement personnel. Site-specific asbestos abatement work would meet the requirements  
26 of both the federal Clean Air Act and Cal-OSHA (CCR Title 8, Subchapter 4, Article 4, Section  
27 1529). If asbestos-containing materials are found, contractors licensed to conduct asbestos  
28 abatement work will be retained and will direct the abatement. In addition, the applicable  
29 Air Quality Management District(s) will be notified 10 days prior to initiation of demolition  
30 activities of asbestos-containing materials.
- 31 • Containers suspected of, or confirmed as, containing lead-based paint will be separated  
32 from other building materials during the demolition process. Separated paint will be  
33 classified as a hazardous waste if the lead content exceeds 1,000 parts per million and  
34 will be disposed of in accordance with applicable regulations.
- 35 • Sewer lines will be plugged with concrete to prevent soil and/or groundwater  
36 contamination, and the end of the lines will be flagged above ground for future location and  
37 identification.
- 38 • Gas lines will be plugged or capped and the end of the lines will be flagged above ground for  
39 future location and identification.
- 40 • The use of explosives for demolition will not be allowed for any structures that contain  
41 asbestos, lead-based paint, or any other hazardous materials in concentrations that would  
42 create a substantial hazard to the public or the environment should they become airborne as  
43 a result of blasting.

- 1           • Hazardous waste, including contaminated soil, generated at demolition sites will be handled,  
2           hailed, and disposed of at an appropriately licensed disposal facility under appropriate  
3           manifest by a licensed hazardous waste hauler.

4           Implementation of this mitigation measure will ensure that hazardous materials present in or  
5           associated with structures being demolished will not be released into the environment.

#### 6           **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

7           Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
8           Chapter 20, *Public Services and Utilities*.

#### 9           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or** 10          **Minimizes Any Effect on Worker and Public Health and Safety**

11          Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
12          Chapter 20, *Public Services and Utilities*.

#### 13          **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 14          **Plan**

15          Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
16          1A in Chapter 19, *Transportation*.

#### 17          **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to** 18          **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance** 19          **Facilities**

20          **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
21          an existing or proposed school or other sensitive receptor (for this analysis, a hospital or park) and  
22          releases hazardous materials that pose a health hazard. However, there are no schools, parks, or  
23          hospitals located within 0.25 mile of the Alternative 1A water conveyance alignment (Figure 24-8).  
24          Therefore, there would be no effect due to exposure of sensitive receptors to hazardous materials,  
25          substances or waste during construction of the water conveyance facilities. Potential air quality  
26          effects on sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

27          **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
28          Alternative 1A water conveyance alignment, therefore, there would be no impact due to exposure of  
29          sensitive receptors to hazardous materials, substances or waste during construction of the water  
30          conveyance facilities. No mitigation is required. Potential air quality effects on sensitive receptors  
31          are discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

#### 32          **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,** 33          **Create a Significant Hazard to the Public or the Environment**

34          **NEPA Effects:** As described in Section 24.1, *Environmental Setting/Affected Environment*, the storage  
35          and use of bulk quantities of hazardous materials, such as pesticides, fuels, and solvents, is common  
36          throughout the study area. The locations of known or suspected SOCs that may have contaminated  
37          soils and/or groundwater were identified in the study area during the ISA and are presented in  
38          Figure 24-4. SOCs within 0.5 mile of the construction footprint, as well as those within the  
39          construction footprint, for this alternative are identified in Table 24-5. The number of SOCs may

1 change during right-of-way evaluation, land acquisition and preconstruction site-clearance  
 2 investigations, or during construction. Additional SOCs may be identified during these activities, and  
 3 currently identified SOCs may be determined innocuous after site-specific field investigation and  
 4 testing.

5 **Table 24-5. Sites of Concern within 0.5 Mile of Conveyance Alignments**

Site Name	Associated Databases <sup>a</sup>	Summary	Site Within Conveyance Option Construction Footprint
<b>Pipeline/Tunnel Alignment (Alternatives 1A, 2A, 3, 5, 6A, 7, and 8)</b>			
Circle K Ranch	LUST, UST, HIST LUST, CORTESE	The site had petroleum and constituents in soil and groundwater above cleanup standards. Sacramento County made a "No Further Action" determination for this site on September 15, 2008.	No
D-Gas	LUST/UST/HIST LUST, CORTESE	Industrial maintenance facility and pumping station; No regulatory listing	No
Woodward Drilling		Drilling company yard with vehicle maintenance; Open LUST case;	No
Hamatani Farms, Inc.	LUST, STATE UST, CORTESE	Two 1,500 gallon USTs were removed from this site in 1992. The most recent groundwater monitoring report from third quarter 2008 indicates that groundwater in this vicinity contains petroleum products in excess of cleanup standards.	No
<b>Modified Pipeline/Tunnel Alignment (Alternatives 4, 4A, 2D, and 5A)</b>			
Excelsior Middle School	ENVIROSTOR	Previously used for agricultural purposes, potential arsenic contamination in soil.	No
Bay Standard	ENVIROSTOR, CERCLIS/CERCLIS NFRAP, RCRA	Metal and metal plating manufacturing plant.	No
Circle K Ranch	LUST, UST, HIST LUST, CORTESE	The site had petroleum and constituents in soil and groundwater above cleanup standards. Sacramento County made a "No Further Action" determination for this site on September 15, 2008.	No
<b>East Alignment (Alternatives 1B, 2B, and 6B)</b>			
Circle K Ranch	LUST, STATE UST, CORTESE	The site had petroleum and constituents in soil and groundwater above cleanup standards. Sacramento County made a "No Further Action" determination for this site on September 15, 2008.	No
Paradise Point Engine and Boat Repair	ENVIROSTOR, VCP, CA WDS, CORTESE, SLIC	Spent sand blast grit containing copper and zinc was disposed of at this site. The grit was removed in 2004 and remaining concentrations in soil were below the soil cleanup standards.	No
Kinder Morgan Energy	SLIC	Pipeline access station; SLIC; Refined petroleum products pipeline	Yes

Site Name	Associated Databases <sup>a</sup>	Summary	Site Within Conveyance Option Construction Footprint
D&D Flying Service	SLIC	A 1990 inspection report indicates that this site had no rinsewater containment for its agricultural spraying operation. No files were found to indicate that any investigation or cleanup was undertaken.	No
Hamatani Farms, Inc.	LUST, STATE UST, CORTESE	Two 1,500 gallon USTs were removed from this site in 1992. The most recent groundwater monitoring report from third quarter 2008 indicates that groundwater in this vicinity contains petroleum products in excess of cleanup standards.	No
Sarale Farms	LUST, STATE UST, CORTESE	A 10,000 gallon UST was removed from this site in 1992. Soil and groundwater contain petroleum products in excess of cleanup standards. The San Joaquin County Environmental Health Department issued a letter in December 2008 requiring continued monitoring of groundwater and additional assessment of groundwater for petroleum.	Yes
Dump Site A	LUST, STATE UST, CORTESE	Current service station; Sacramento County Contaminated Site case	No
Woodward Drilling		Drilling company yard with vehicle maintenance; Open LUST case;	No
Stockton Naval Communications	RCRA CORRACTS/TSD, CERCLIS/NFRAP, RCRA INFO, PADS, RESPONSE, HIST-CAL, CORTESE	United States Navy communications facility	No
<b>West Alignment (Alternatives 1C, 2C, and 6C)</b>			
JR Simplot	CERCLIS/NFRAP, ENVIROSTOR, STATE UST, CA WDS, CORTESE, SLIC	This is a former fertilizer plant in Courtland. Prior to ownership by Simplot, it was owned by Occidental Chemical, and based on file review appears to have stored or formulated pesticides on-site. No files from after 1996 were available. At that time, low levels of pesticides were present in soils and groundwater, and groundwater contained levels of nitrates in excess of cleanup standards. The site is undergoing phytoremediation; no monitoring data were available to review the status of cleanup in 2009.	No
Norm's Auto Garage		Closed/vacant auto repair facility; Closed LUST case	No
Woodward Drilling		Drilling company yard with vehicle maintenance; Open LUST case;	No
Agricultural Chemical Operation A		Agricultural chemical storage/batch plant; No regulatory listing; ASTs located inside and outside of secondary containment. Drums stored onsite. Staining inside secondary containment.	No

Site Name	Associated Databases <sup>a</sup>	Summary	Site Within Conveyance Option Construction Footprint
Marine Emporium	CA WDS	Marine repair shop; Contra Costa Contaminated Site List	No
Mill Site A		Agricultural mill; No regulatory listing; Large agricultural mill with outbuildings, considerable debris. Historical aerial photographs indicate presence of facility since 1972. Most of the debris has accumulated since the 1999 aerial photograph	Yes
Clarksburg Diesel Fuel Spill	SLIC	Site is located at a vineyard, and was the result of a 500-gallon spill of diesel fuel onto soil in December 2006. Fifteen tons of soil was removed in 20-by-50-foot area. No confirmation sampling data were found in the file.	No
Reclamation District 999 Yard		Industrial maintenance facility and pumping station	No
Bethel Island Golf Course	LUST/UST/HIST LUST	Petroleum releases have occurred from USTs at this site. Soil and groundwater contain petroleum products in excess of cleanup standards. Remediation is ongoing.	No
<b>Through Delta/Separate Corridors (Alternative 9)</b>			
Unocal Bulk Plant	RCRA INFO, SLIC	The site operated as a bulk storage and distribution facility for petroleum products from 1922 to 1980, with 11 ASTs and underground pipelines. Products were shipped by barge on the Sacramento River. The latest monitoring report from third quarter 2008 indicates that groundwater contains petroleum products above cleanup standards.	Yes
Former BC Stocking Bulk Plant	RCRA INFO, SLIC	The site operated as a bulk storage and distribution facility for petroleum products for an unknown period of time, with six ASTs and underground pipelines. A sampling investigation from 2008 indicates that groundwater contains petroleum products in excess of cleanup standards.	No
Crop Production Services		Agricultural chemical supply company; No regulatory listing; Historical aerial photographs show site presence since at least the 1950s	No
D-Gas	LUST/UST/HIST LUST, CORTESE	Industrial maintenance facility and pumping station; No regulatory listing	No

<sup>a</sup> A summary of the federal and state database searches performed in the Phase 1 ISA (May 2009) is provided in Appendix 24A, *Draft Phase 1 Initial Site Assessment*.

1

2 California Government Code 65962.5 directs DTSC to compile a list, known as the “Cortese List,” of  
3 hazardous materials sites. These sites consist of leaking underground storage tanks, solid waste  
4 facilities, landfills, and sites with potential or confirmed hazardous substance releases. Although this  
5 list is no longer updated by the state, it nonetheless provides valuable information to developers to

1 prevent the re-release of hazardous materials resulting from excavation or disturbance of hazardous  
2 materials by preventing unanticipated disturbance of these sites. “Cortese List” sites make up a  
3 subset of the mapped SOCs.

4 There are no “Cortese List” sites or known SOCs within the construction footprint of Alternative 1A  
5 (Table 24-5 and Figure 24-4), and therefore there would be no conflict pertaining to a known  
6 hazardous materials site during construction of the water conveyance facilities, and thus, no related  
7 hazard to the public or the environment. For those hazardous materials sites identified within the  
8 0.5-mile radius, but which are not within the construction footprint, there would be no potential for  
9 the construction of the water conveyance facilities to disturb those sites such that there would be a  
10 re-release of hazardous materials that would create a hazard for the public or environment.  
11 Therefore, there would be no effect. The potential for encountering unknown hazardous materials  
12 sites during the course of construction is discussed under Impact HAZ-1.

13 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
14 conveyance facility under this alternative, there would be no conflict with known hazardous  
15 materials sites during construction of the water conveyance facilities, and therefore, no related  
16 hazard to the public or the environment. Accordingly, there would be no impact. No mitigation is  
17 required. The potential for encountering unknown hazardous materials sites during the course of  
18 construction is discussed under Impact HAZ-1.

19 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
20 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
21 **Study Area during Construction of the Water Conveyance Facilities**

22 **NEPA Effects:** Development around an airport, particularly in the approach and departure paths, can  
23 create obstructions in the airspace traversed by an approaching or departing aircraft. Additionally,  
24 certain land uses have the potential to create hazards to aircraft such as a distracting glare, smoke,  
25 steam, or invisible heat plumes. Safety impacts from aircraft accidents near airports are typically  
26 avoided by specifying the types of land uses allowed, and thereby limiting the number of people who  
27 would be exposed to the risk of an accident, and avoiding land uses that could create hazards to air  
28 traffic. Airspace protection primarily involves limitations on the height of objects on the ground near  
29 airports.

30 High-profile construction equipment, such as tall cranes for installation of pipelines, placement of  
31 concrete fill in intake piles, and removal of cofferdam sheet piles, for example, and pile drivers, such  
32 as would be used during the construction of the intakes, have the potential to result in safety  
33 hazards to aircraft during takeoff and landing if the equipment is operated too close to runways. It is  
34 not yet known what the maximum height of the high-profile construction equipment that would be  
35 used would be. Tower cranes, for example, may be required, and a typical tower crane can have a  
36 total height greater than 200 feet—a height that could be considered an obstruction or hazard to  
37 navigable air space if located near an airport. Similarly, tall structures, such as the surge towers at  
38 the pumping plants for Intakes 1 and 2, could also pose a risk to air safety. As shown in Figure 24-9  
39 and Table 24-6, three private airports (Borges-Clarksburg Airport, Walnut Grove Airport, and Spezia  
40 Airport) and one public airport (Byron Airport) are located within 2 miles of the water conveyance  
41 facilities for Alternative 1A. The Borges-Clarksburg Airport, located 2 miles northeast of the town of  
42 Clarksburg, is within 0.5 mile of a proposed intake work area (Intake 1) and less than 1 mile from  
43 the intake. These are water conveyance feature construction areas where high-profile construction  
44 equipment may be used.

1 **Table 24-6. Distance between Airports within the Study Area and the Water Conveyance Facilities**  
 2 **Alignments (miles)**

Airport	Pipeline/ Tunnel Alignment (Alt. 1A, 2A, 3, 5, 6A, 7 and 8)	Modified Pipeline/ Tunnel Alignment (Alt. 2D)	Modified Pipeline/ Tunnel Alignment (Alt. 4, 4A, and 5A)	East Alignment (Alt. 1B, 2B, and 6B)	West Alignment (Alt. 1C, 2C, and 6C)	Through Delta/ Separate Corridors (Alt. 9)
Delta Air Park (private)	5.8	4.8	4.8	11.2	0.2	6.5
Garibaldi Brothers Airport (private)	29.0	30.0	30.0	31.4	14.4	23.5
Maine Prairie Airport (private)	14.9	15.7	15.7	14.9	10.2	17.9
Borges-Clarksburg Airport (private)	0.4	0.4	1.6	0.4	0.3	11.4
Spezia Airport (private)	0.1	1.9	1.9	3.4	3.2	1.6
Byron Airport (public)	1.5	1.0	1.0	1.5	0.9	3.5
Lost Isle Seaplane Base (public)	4.0	3.0	3.0	0.6	8.0	3.5
Walnut Grove Airport (private)	0.3	2.3	2.3	3.9	2.8	2.0
Flying B Ranch Airport (private)	3.7	1.4	1.4	3.1	4.8	5.6
Funny Farm Airport (private)	5.4	2.5	2.5	9.6	0.5	4.1
Franklin Field Airport (public)	4.3	0.6	0.6	2.3	6.1	4.7

3

4 Walnut Grove and Spezia Airports, on Andrus Island and Tyler Island, respectively, are within 2  
 5 miles of the following proposed features or areas: a temporary 69-kilovolt (kV) transmission line; a  
 6 permanent 230-kV transmission line; a RTM area; the tunnel; a tunnel work area; and the main  
 7 construction shaft for the tunnel. Byron Airport, less than 1.5 miles west of Clifton Court Forebay, is  
 8 within 2 miles of a proposed 12-kV temporary transmission line; a proposed 230-kV permanent  
 9 transmission line; Byron Tract Forebay; and a borrow and/or spoils area. With the exception of the  
 10 proposed transmission lines, construction of these features or work in these areas would not  
 11 require the use of high-profile construction equipment. Because construction of the proposed  
 12 transmission lines would potentially require high-profile equipment (e.g., cranes), and because  
 13 construction of the 230-kV transmission line would require the use of helicopters during the  
 14 stringing phase, the safety of air traffic arriving or departing from either of these airports could be  
 15 compromised during construction of the proposed transmission lines.

16 To help ensure protection of airspace, under 14 CFR Part 77, the FAA requires project proponents to  
 17 inform them about proposed construction or alteration of objects within 20,000 feet of a public-use  
 18 or military runway and having a height exceeding a 100:1 imaginary surface (1 foot upward per 100  
 19 feet horizontally) beginning at the nearest point of the runway for runways greater than 3,200 feet  
 20 in length. For shorter public-use or military runways, the notification surface has a 50:1 slope and  
 21 extends 10,000 feet from the runway. Exceptions to this notification requirement are made for “any  
 22 object that would be shielded by existing structures of a permanent and substantial character or by  
 23 natural terrain or topographic features of equal or greater height, and would be located in the  
 24 congested area of a city, town, or settlement where it is evident beyond all reasonable doubt that the  
 25 structure so shielded would not adversely affect safety in air navigation.” Notice must be provided  
 26 for temporary objects such as construction cranes and any object more than 200 feet in height above

1 ground level or above the established airport elevation. Notification of the FAA enables them to  
 2 evaluate the effect of the proposed object on air navigation through an aeronautical study  
 3 (Obstruction Evaluation/Airport Airspace Analysis [OE/AAA]). The OE/AAA will indicate whether  
 4 the project would have a “substantial adverse effect” on air safety. If it is determined that the  
 5 proposed structure or structures exceeds obstruction standards or will have an adverse effect on  
 6 navigable airspace, the project proponent is given the opportunity to amend the project proposal to  
 7 avoid the impact; adjustments to aviation requirements that would accommodate the project are  
 8 investigated as well. As described in Section 24.2.2.17, *State Aeronautics Act*, Caltrans requires  
 9 notification, in writing, for proposed construction of any state building or enclosure within 2 miles  
 10 of any airport before an agency acquires title to the property for the building or enclosure or for an  
 11 addition to an existing site (California Public Utilities Code, Section 21655). Caltrans would respond  
 12 with a written investigation report of the proposed site and provide recommendations, as necessary,  
 13 to reduce potential hazards to air navigation. As part of an environmental commitment pursuant to  
 14 the State Aeronautics Act, DWR would adhere to these recommendations, which would reduce the  
 15 potential for adverse effects on air safety (e.g., recommendations for the marking and/or lighting of  
 16 temporary or permanent structures exceeding an overall height of 200 feet above ground level), as  
 17 would compliance with the recommendations of the OE/AAA (see Appendix 3B, *Environmental*  
 18 *Commitments, AMMs, and CMs*). Therefore, this effect would not be adverse.

19 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 20 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 21 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
 22 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
 23 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
 24 is operated too close to runways. Three private airports (Borges-Clarksburg, Spezia, and Walnut  
 25 Grove Airports) and one public airport (Byron Airport) are located within 2 miles of the  
 26 construction footprint of Alternative 1A. DWR would coordinate with Caltrans’ Division of  
 27 Aeronautics prior to initiating construction and would comply with its recommendations based on  
 28 its investigation(s), as well as complying with the recommendations of the OE/AAA (for Byron  
 29 Airport). These recommendations, which could include limitations necessary to minimize potential  
 30 problems, such as the use of temporary construction equipment, supplemental notice requirements,  
 31 and marking and lighting high-profile structures would reduce the potential for impacts on air  
 32 safety. Accordingly, this impact would be less than significant. No mitigation is required.

33 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 34 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 35 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 36 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

37 **NEPA Effects:** As shown in Figure 24-10, no portion of Alternative 1A is located in or near an area  
 38 designated as a High or Very High Fire Hazard Severity Zone. The northernmost and southernmost  
 39 portions of Alternative 1A, where intake facilities and fuel stations, and the Byron Tract Forebay,  
 40 respectively, would be located, are near Moderate Fire Hazard Severity Zones (Figure 24-10).  
 41 Construction, operation, and maintenance of the water conveyance facilities would involve the use  
 42 of equipment and ignitable materials, and would involve activities that could potentially start fires.  
 43 For example, as discussed in Chapter 3, *Description of Alternatives*, facility maintenance would  
 44 consist of activities such as painting, cleaning, repairs, and other routine tasks. Some of these  
 45 activities would involve the use of flammable chemicals, such as fuels and solvents, which could be

1 inadvertently ignited by sparks from equipment/machinery if proper safety measures were not  
2 employed. Further, during construction, fires could be caused by a variety of factors, including  
3 vehicle exhaust, welding activities, parking on dry grass, and accidental ignition of fuel. However, as  
4 previously discussed, the study area mainly consists of agricultural lands with pockets of rural  
5 residential land uses that are not adjacent to wildlands, as well as residential areas that are  
6 intermixed with wildlands. The potential for construction or operation and maintenance activities to  
7 generate hazards associated with wildland fires would be minimal. Further, as described in  
8 Appendix 3B, *Environmental Commitments, AMMs, and CMs*, measures to prevent and control  
9 wildland fires would be implemented by DWR during construction, and operation and maintenance  
10 of the water conveyance facilities in full compliance with Cal-OSHA standards for fire safety and  
11 prevention. These measures would include the following.

- 12 • Construction sites would have an adequate onsite supply of water and all-weather access for  
13 firefighting equipment and emergency vehicles.
- 14 • A list of all major fire hazards, proper handling and storage procedures for hazardous materials,  
15 potential ignition sources and their control, and the type of fire protection equipment necessary  
16 to control each major hazard.
- 17 • Smoking would be allowed only in areas designated for smoking, and these areas would be  
18 cleared of vegetation, or in enclosed vehicles. Cigarette butts are to be disposed of in car  
19 ashtrays or other approved disposal containers and dumped daily in a proper receptacle off the  
20 work site.
- 21 • The contractor would be responsible for maintaining appropriate fire suppression equipment at  
22 the work site including an all-wheel drive water truck or fire truck with a water tank of at least  
23 3,000 gallon capacity. Fire extinguishers, shovels and other firefighting equipment would be  
24 available at work sites and on construction equipment. Each vehicle on the ROW would be  
25 equipped with a minimum 20 pound (or two 10 pound) fire extinguisher(s) and a minimum of 5  
26 gallons of water in a fire-fighting apparatus (e.g., bladder bag).
- 27 • At the work site, a sealed fire toolbox would be located at a point accessible in the event of fire.  
28 This fire toolbox will contain: one back-pack pump-type extinguisher filled with water, two axes,  
29 two McLeod fire tools, and enough shovels so that each employee at the work site can be  
30 equipped to fight fire.
- 31 • Gasoline-powered construction equipment with catalytic converters would be equipped with  
32 shielding or other acceptable fire prevention features. Internal combustion engines would be  
33 equipped with spark arrestors.
- 34 • Welding sites would include fire prevention provisions.
- 35 • The contractor would maintain contact with local firefighting agencies throughout the fire  
36 season for updates on fire conditions, and such fire conditions would be communicated to the  
37 contractor's employees daily.
- 38 • Vehicles would be restricted to the work site unless otherwise allowed for fire control  
39 procedures.
- 40 • Depending on the characteristics of the construction site, the dimensions and use of the rooms,  
41 the onsite equipment, the physical and chemical properties of the substances present and the  
42 maximum potential number of workers present, an adequate number of appropriate basic fire-

1 fighting devices and, where required, automatic fire extinguishing systems would be provided at  
2 the site.

- 3 • Basic fire-fighting devices and automatic fire extinguishing systems would be regularly  
4 maintained, checked, and tested.
- 5 • Basic fire-fighting devices would be positioned in a visible place which is free from obstruction.
- 6 • The location of fire-fighting equipment would be indicated by fire safety signs. The signs would  
7 be sufficiently resistant and placed at appropriate points.
- 8 • If substances which can cause combustion or substances the use of which may produce  
9 explosive dust or gas are used or preserved on a construction site, special protective measures  
10 (ventilation, prohibition on the use of open fire, etc.) would be applied in order to prevent the  
11 risk of fire and explosion.
- 12 • Every person at work on a construction site would, so far as is reasonably practicable, be  
13 instructed in the correct use of any fire-fighting equipment which it may be necessary to use.

14 These measures and potentially others would be guided by implementation of an FPCP in  
15 coordination with federal, state, and local agencies, as part of the project as an environmental  
16 commitment (Appendix 3B, *Environmental Commitments, AMMs, and CMs*). Because development  
17 and implementation of measures under the FPCP would help ensure that people or structures would  
18 not be subject to a substantial risk of loss of property, personal injury, or death involving wildland  
19 fires and because the proposed water conveyance facilities would not be located in a High or Very  
20 High Fire Hazard Severity Zone, this effect would not be adverse.

21 **CEQA Conclusion:** People or structures would not be subject to a substantial risk of loss, injury or  
22 death involving wildland fires during construction or operation and maintenance of the water  
23 conveyance facilities because the BDCP would comply with Cal-OSHA fire prevention and safety  
24 standards; DWR would implement standard fire safety and prevention measures, as part of a FPCP  
25 (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water conveyance  
26 facilities would not be located in a High or Very High Fire Hazard Severity Zone. Therefore, this  
27 impact would be less than significant. No mitigation is required.

28 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
29 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
30 **Water Conveyance Facilities**

31 **NEPA Effects:** During long-term operation and maintenance of the water conveyance facilities, the  
32 transport, storage, and use of chemicals or hazardous waste materials may be required. Hazardous  
33 waste generated at facility sites would be handled, hauled, and disposed of at an appropriately  
34 licensed disposal facility under appropriate manifest by a licensed hazardous waste hauler (see  
35 Appendix 3B, *Environmental Commitments, AMMs, and CMs*). Maintenance requirements for the  
36 tunnels have not yet been finalized (See Chapter 3, *Description of Alternatives*, Section 3.6.1.2, for a  
37 general description of the operation and maintenance requirements for the conveyance facilities).  
38 However, the operation and maintenance of certain alternative features, such as the intake pumping  
39 plants and the intermediate pumping plant, would require the use of hazardous materials, such as  
40 fuel, oils, grease, solvents, and paints. For example, planned maintenance at pumping facilities would  
41 include checking oil levels, replacing oil in the pumps and greasing pump bearings. Additionally,  
42 routine facility maintenance would involve painting of pumping plants and appurtenant structures,

1 cleaning, repairs, and other routine tasks that ensure the facilities are operated in accordance with  
2 design standards.

3 Facility equipment maintenance would be required for the intake pumping plants, sedimentation  
4 basins and solids lagoons, the intermediate forebay and pumping plant, and Byron Tract Forebay.  
5 Timing of maintenance activities would be variable and would be dictated by the schedule and day-  
6 to-day requirements of specific components being maintained. Maintenance activities at the intakes  
7 would include debris and sediment removal, biofouling and corrosion prevention, and repairs  
8 following physical impacts on the intake structures. Sediment and solids removal from the  
9 sedimentation basins and solids lagoons, respectively, is expected to be an ongoing process during  
10 operation of the water conveyance facilities. During operation of the water conveyance facilities,  
11 water would enter sedimentation basins at five intakes along the east bank of the Sacramento River  
12 in the north Delta. Settled sediment would then be pumped to solids lagoons where it would be  
13 dewatered and removed for disposal off site; sediment pore water would be pumped back into the  
14 sedimentation basins. The dewatered solids, like sediment dredged at the intakes, may contain  
15 pesticides from agricultural and urban areas, metals or organic compounds from urban stormwater  
16 runoff and mercury from historic mining upstream of the Delta. The wide variety of pesticides that  
17 has been applied, the numerous crops grown in the region, and the fact that predominant land use  
18 across the Delta supports agriculture indicate that persistent pesticides that have been widely  
19 applied (e.g., organochlorines) and are likely to be found in the soils and potentially sediment  
20 throughout the Delta. Because of their relatively low water solubility, persistent pesticides and  
21 compounds generally accumulate in the environment in sediment and soil, as well as in the fatty  
22 tissue of terrestrial and aquatic animals and humans. Human exposure to organochlorine pesticides  
23 is primarily through the diet. No comprehensive area-wide soil or sediment sampling program is  
24 known to have been conducted to evaluate pesticide residues from agricultural use. Thus, it is not  
25 known if persistent pesticide concentrations in dewatered solids from the solids lagoons, or in  
26 dredged sediment from around the intakes would exceed applicable federal or state standards. As  
27 previously described, although the concentration of mercury in sediment throughout the study area  
28 is not known, one study indicated that the mercury concentration in sediment (suspended) at  
29 Freeport, just upstream of the intake locations, was less than 10 ng/l, below the recommended  
30 criterion of 50 ng/l (Domagalski 2001).

31 Based on a worst-case scenario, considering the throughput of the intakes at a maximum flow of  
32 3,000 cfs, an estimated 137,000 dry pounds of solids per day would be pumped to the solids lagoons.  
33 During periods of high sediment load in the Sacramento River, the daily mass of solids would be  
34 expected to increase to up to 253,000 dry pounds per day. The annual volume of solids is anticipated  
35 to be approximately 486,000 cubic feet (dry solids). An anticipated 18,000 cubic yards of dry  
36 sediment/solids would be produced annually as a result of maintenance of the solids lagoons.  
37 Contaminated solids could pose a hazard to the environment if improperly disposed of, which would  
38 be an adverse effect. Implementation of Mitigation Measure HAZ-6 (described below) would help  
39 ensure that there are no adverse effects on soil, groundwater, or surface water due to improperly  
40 disposed of lagoon solids. Dewatered solids may require special management to meet  
41 discharge/disposal requirements. To ensure that potentially contaminated sediment from  
42 maintenance dredging activities at the intakes would not adversely affect soil, groundwater, or  
43 surface water, a SAP would be implemented prior to any dredging activities, as described under  
44 Impact HAZ-1 for this alternative. All sediment would be characterized chemically prior to reuse  
45 and/or disposal to ensure that reuse of this material would not result in a hazard to the public or the  
46 environment.

1 To the extent practicable, scheduled routine and emergency maintenance activities associated with  
2 equipment at the intakes and intermediate pumping plant would be conducted at a permanent  
3 maintenance facility at the intakes and intermediate pumping plant. The intake facilities'  
4 maintenance facility would be located at one of the five intake locations; the precise location has not  
5 yet been determined. The maintenance facility and activities performed at the intermediate  
6 pumping plant would likely be similar to the maintenance facility at the intakes; however, there  
7 would be no sedimentation basin (California Department of Water Resources 2010a:7-24).  
8 Replacement of erosion protection on the levees and embankments would also occur periodically.

9 Some of the materials used in routine facility and equipment maintenance may include hydraulic oil  
10 for lubricating machinery, fuel, batteries for vehicles and equipment, nitrogen, carbon dioxide or  
11 clear agent fire suppression, paints, cleaning solvents and chemicals, and pesticides and herbicides  
12 for grounds maintenance. Some of these materials, for example, bulk fuel and lubricants, would  
13 likely be stored in the maintenance facilities. Vehicle fueling that occurs during operations and  
14 maintenance activities and could pose the risk of fueling spills and leakage from bulk fuel storage  
15 tanks. Accidental release of fuels, lubricants, solvents, grounds care chemicals (e.g., fertilizers,  
16 pesticides, and herbicides), and other hazardous materials could potentially have adverse effects if  
17 not contained or if released in large enough quantities, as described under Impact HAZ-1 above.  
18 However, under normal use, the inadvertent release of these types of chemicals would likely only  
19 have the potential to result in minor, temporary hazards to workers immediately adjacent to these  
20 releases. Because these chemicals would be used in small quantities and inadvertent releases would  
21 be localized, and because, as discussed under Impact HAZ-1, environmental commitment measures  
22 implemented as part of the HMMPs, SPCCPs, and SWPPPs, including equipping facility buildings with  
23 spill containment and cleanup kits; ensuring that hazardous materials containment containers are  
24 clearly labeled with identity, handling and safety instructions, and emergency contact information;  
25 and requiring that personnel be trained in emergency response and spill containment techniques,  
26 would minimize the potential for the accidental release of hazardous materials and would help  
27 contain and remediate hazardous spills should they occur, it is unlikely that the general public or the  
28 environment would be adversely affected due to these types of activities.

29 The locations of airports with respect to Alternative 1A are provided in Figure 24-9. The Borges-  
30 Clarksburg, Walnut Grove, and Spezia Airports (all private air facilities), and the Byron Airport (a  
31 public airport), are within 2 miles of the Alternative 1A construction footprint (Figure 24-9 and  
32 Table 24-6), as discussed under Impact HAZ-1 for this alternative. With the exception of power  
33 transmission lines supplying power to pumps, surge towers, and other equipment used for water  
34 conveyance facilities operation and maintenance, water conveyance facilities operations and  
35 maintenance are not anticipated to require high-profile equipment (i.e., equipment with a vertical  
36 reach of 200 feet or more), the use of which near an airport runway could result in an adverse effect  
37 on aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and coordinate  
38 with Caltrans' Division of Aeronautics prior to initiating maintenance activities requiring high-  
39 profile equipment to assess whether a site investigation is necessary. If a site investigation is  
40 performed, DWR would adhere to Caltrans' recommendations in order to avoid any adverse effects  
41 on air safety. Further, compliance with the results of the OE/AAA for Byron Airport would reduce  
42 the risk for adverse effects on air traffic safety by implementing recommendations which could  
43 include limitations necessary to minimize potential problems, supplemental notice requirements,  
44 and marking and lighting high-profile structures.

45 In summary, during routine operation and maintenance of the water conveyance facilities the  
46 potential would exist for the accidental release of hazardous materials and other potentially

1 hazardous releases (e.g., contaminated lagoon solids and sediment), and for interference with air  
 2 safety should high-profile equipment be required for maintenance of the proposed transmission  
 3 lines near an airport. Accidental hazardous materials releases, such as chemicals directly associated  
 4 with routine maintenance (e.g., fuels, solvents, paints, oils), are likely to be small, localized,  
 5 temporary and periodic; therefore, they are unlikely to result in adverse effects on workers, the  
 6 public, or the environment. Further, BMPs and measures implemented as part of SWPPPs, SPCCPs,  
 7 and HMMPs would be developed and implemented as part of the BDCP, as described above under  
 8 Impact HAZ-1, and in detail in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, which  
 9 would reduce the potential for accidental spills to occur and would result in containment and  
 10 remediation of spills, should they occur. Additionally, 18,000 cubic yards of dry sediment/solids  
 11 would be produced annually as a result of maintenance of the solids lagoons with three intakes  
 12 operating. Contaminated solids could pose a hazard to the environment if improperly disposed of,  
 13 which would be an adverse effect. With implementation of Mitigation Measure HAZ-6, solids from  
 14 the solids lagoons would be sampled and characterized to evaluate disposal options, and disposed of  
 15 accordingly at an appropriate, licensed facility. These measures would ensure that this effect would  
 16 not create a substantial hazard to the public or the environment during operation and maintenance  
 17 of the water conveyance facilities, and therefore there would be no adverse effect.

18 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
 19 operation and maintenance of the water conveyance facilities and the potential interference with air  
 20 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
 21 could have impacts on the public and environment. However, implementation of the BMPs and other  
 22 activities required by SWPPPs, HMMPs, SPCCPs, SAPs as well as adherence to all applicable FAA  
 23 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
 24 when performing work with high-profile equipment within 2 miles of an airport, which would  
 25 include implementation of recommendations to provide supplemental notice and/or equip high-  
 26 profile structures with marking and lighting, would ensure that operation and maintenance of the  
 27 water conveyance facilities would not create a substantial hazard to the public, environment or air  
 28 traffic safety. Additionally, 18,000 cubic yards of potentially contaminated dry sediment/solids  
 29 would be produced annually as a result of operation and maintenance of the solids lagoons with  
 30 three intakes operating. Contaminated solids could pose a hazard to the environment if improperly  
 31 disposed of, which would be considered a significant impact. However, with implementation of  
 32 Mitigation Measure HAZ-6, solids from the solids lagoons would be sampled and characterized to  
 33 evaluate disposal and/or reuse options, and would be disposed of accordingly at an appropriate,  
 34 licensed facility to avoid any significant impacts associated with the improper disposal of potentially  
 35 contaminated sediment. Therefore this impact would be less than significant.

36 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 37 **and/or Disposal**

38 Project proponents will ensure that dewatered solids from the solids lagoons are sampled and  
 39 tested/characterized at a certified laboratory prior to reuse and/or to evaluate disposal options.  
 40 At minimum, the solids would be tested for hazardous characteristics (i.e., toxicity, corrosivity,  
 41 ignitability, and reactivity) consistent with federal standards for identifying hazardous waste  
 42 (40 CFR Part 261). All dewatered solids would be disposed of in accordance with applicable  
 43 federal, state, and local regulations at a solid waste disposal facility approved for disposal of  
 44 such material.

1 Implementation of this measure will ensure that dewatered solids do not reintroduce hazardous  
 2 constituents to the environment if they are reused, and that they are disposed of properly if they  
 3 do contain hazardous levels of contaminants such as persistent pesticides and mercury.

4 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 5 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 6 **CM13, CM14, CM16, CM18 and CM19**

7 *NEPA Effects:* Construction, and operation and maintenance of the proposed conservation measures  
 8 as part of Alternative 1A could have effects related to hazardous materials and potential hazards  
 9 that are similar in nature to those discussed above for construction, and operation and maintenance  
 10 of proposed water conveyance facilities. Although similar in nature, the potential intensity of any  
 11 effects would likely be substantially lower because the nature of the activities associated with  
 12 implementing the conservation measures would be different (e.g., deep excavation for pipelines and  
 13 tunnels would not be required), less heavy construction equipment would be required, and the  
 14 activities would be implemented in a shorter time frame. Further, potential effects from  
 15 implementation of the conservation measures would be dispersed over a larger area and would  
 16 generally involve substantially fewer construction and operation effects associated with built  
 17 facilities.

18 Implementing habitat restoration and enhancement projects in conservation zones that have  
 19 proposed restoration opportunity areas would require use of construction equipment necessary to  
 20 excavate restoration sites, and to construct or modify levees on and adjacent to Delta waterways.  
 21 Use and maintenance of this equipment is expected to result in the potential for hazards related to  
 22 the transport, use, and disposal of hazardous materials, such as fuels, oils, lubricants, paints and  
 23 other hazardous substances. Other activities, including the intentional demolition of existing  
 24 structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM, would also present the  
 25 potential to generate hazards or release hazardous materials, or activities resulting in the damage or  
 26 disruption of existing infrastructure such that hazardous conditions were created. In addition,  
 27 certain operations and maintenance activities, such as controlling for terrestrial and aquatic  
 28 nonnative vegetation will require the use of potentially hazardous herbicides, for example. These  
 29 activities would occur in sensitive Delta waterways and upland areas or could occur in and around  
 30 areas potentially hazardous for construction workers and operations and maintenance workers.  
 31 Reasonably foreseeable upset and accident conditions related to these materials would also create a  
 32 potential hazard to the public or environment.

33 As discussed in Chapter 8, *Water Quality*, Chapter 11, *Fish and Aquatic Resources*, and Chapter 25,  
 34 *Public Health*, Alternative 1A habitat restoration actions (particularly CM2, *Yolo Bypass Fisheries*  
 35 *Enhancement*; CM4, *Tidal Natural Communities Restoration*; CM5, *Seasonally Inundated Floodplain*  
 36 *Restoration*; CM6, *Channel Margin Enhancement*; and CM7 *Riparian Natural Community Restoration*)  
 37 are likely to result in increased production, mobilization, and bioavailability of methylmercury in the  
 38 aquatic system due to biogeochemical processes. CM12, *Methylmercury Management* provides for  
 39 site-specific assessment of restoration areas, integration of design measures to minimize  
 40 methylmercury production, and site monitoring and reporting.

41 Some of the proposed restoration activities that would occur under CM2 – CM11 could involve the  
 42 conversion of active or fallow agricultural lands to natural landscapes, such as vernal pools,  
 43 floodplains, grasslands, and wetlands. As described in Section 24.1.2.2, *Hazards from Agricultural*  
 44 *Practices*, a wide variety of pesticides has been used throughout the study area for decades, and may

1 be present in agricultural lands (e.g., in the soil). As described in Chapter 8, *Water Quality*, in the  
2 short-term, tidal and non-tidal wetland restoration, as well as seasonal floodplain restoration (i.e.,  
3 CM4, CM5, and CM10) over former agricultural lands may result in contamination of water in these  
4 restored areas with pesticide residues contained in the soils or other organic matter. Present-use  
5 pesticides typically degrade fairly rapidly, and in such cases where pesticide containing soils are  
6 flooded, dissipation of those pesticides would be expected to occur rapidly. Additionally, significant  
7 increases in organochlorine and other persistent legacy pesticides are not expected in the water  
8 column because these lipophilic chemicals strongly partition to sediments. Also, concentrations in  
9 the water column should be relatively short-lived because these pesticides settle out of the water  
10 column via sediment adsorption in low-velocity flow. Accordingly, restoration activities on former  
11 agricultural lands, particularly tidal and non-tidal wetland restoration, and seasonal floodplain  
12 restoration, would not create a substantial hazard to the public or environment through pesticide  
13 release.

14 Additionally, construction of other conservation measures related to reducing ecosystem stressors  
15 could result in the unintended release of hazardous materials as a result of constructing facilities  
16 near Delta waterways. For example, under CM16 and CM18, non-physical fish barriers and fish  
17 hatchery facilities, respectively, would be constructed and could result in effects associated with use  
18 of materials during construction that could create hazardous conditions for construction workers  
19 and affect sensitive habitat in Delta waterways or on agricultural land. Further, operations and  
20 maintenance of CM14 would require the transport, storage and use of liquid oxygen for the existing  
21 Stockton Deep Water Ship Channel aeration facility. BMPs already in place for the existing transport,  
22 storage and use of liquid oxygen would continue. Thus, no adverse effects related to this aspect of  
23 CM14 are anticipated.

24 The potential also exists for release of hazardous substances within 0.25 mile of a school or other  
25 sensitive receptors (i.e., hospitals and parks) depending on the selected locations for implementing  
26 the conservation measures. Potential effects would vary according to the equipment used in  
27 construction and/or operation and maintenance of a specific conservation measures (i.e., whether  
28 hazardous materials are necessary on site), the location and timing of the actions called for in the  
29 conservation measure, and the air quality conditions at the time of implementation. Proposed  
30 conservation measures would be designed to avoid sensitive receptors, and BMPs to minimize the  
31 potential for the accidental release of hazardous materials and to contain and remediate hazardous  
32 spills, as part of the SWPPPs, SPCCPs, and HMMPs, should they occur, would be implemented, as set  
33 forth in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, and therefore, it is unlikely that  
34 school children and staff would be at risk or adversely affected.

35 Constructing conservation measures that could result in a physical change in the environment could  
36 also create conflicts or encounters with known or unknown hazardous materials sites located on or  
37 in the vicinity of conservation component construction sites. For example, implementing CM2–CM11  
38 for habitat restoration and enhancement purposes could potentially result in effects associated with  
39 agricultural and industrial-type hazardous materials at known sites that are listed on the “Cortese  
40 List.” However, because locations within the eleven conservation zones (described in Chapter 3,  
41 *Description of the Alternatives*) for implementing most of the conservation measures have not yet  
42 been determined, it is not known if the conservation measures would be implemented on or near  
43 “Cortese List” sites. Project design would minimize, to the extent feasible, the need to acquire or  
44 traverse areas where the presence of hazardous materials is suspected or has been verified.  
45 Implementation of conservation measures could also involve dredging Delta waterways and other  
46 activities that could disturb contaminated sediments that hold mercury, pesticides, or other

1 constituents. Concentrations capable of posing hazards or exceeding regulatory thresholds could  
2 present a hazard to the construction workers and any contaminated soil or groundwater would  
3 require proper handling or treatment prior to discharge or disposal. Chapter 8, *Water Quality*,  
4 provides further discussion of these potential contaminants.

5 Other potential hazards that could result from implementing conservation measures involve the  
6 potential for safety hazards related to construction in the vicinity of a public or private airport, and  
7 the potential for wildfire hazards in the vicinity of construction sites. There are 11 airports within  
8 the study area (Table 24-6) and 9 airports within 2 miles of the water conveyance alignments  
9 (Figure 24-9). With the exception of the Lost Isle Seaplane Base, Franklin Field Airport and Byron  
10 Airport, these are private facilities. The Garibaldi Brothers Airport is located within the Suisun  
11 Marsh ROA, just south of Fairfield. Additionally, the Delta Air Park is proximate to the West Delta  
12 ROA east of Oakley. Because locations for some of the habitat restoration and enhancement  
13 activities have not yet been determined, the potential exists for some of these activities to occur at  
14 locations within 2 miles of a private or public airport. High-profile construction equipment (i.e., 200  
15 feet or taller), such as cranes, could result in potential safety hazards to aircraft if operated in the  
16 vicinity of a runway; however, it is unlikely that this type of equipment would be employed in the  
17 types of habitat restoration, enhancement and protection activities that would be implemented as  
18 part of the conservation measures. As described for Impact HAZ-4, effects on air safety due to BDCP  
19 implementation would be avoided because project proponents would adhere to all applicable FAA  
20 regulations (14 CFR Part 77) and would coordinate with Caltrans' Division of Aeronautics prior to  
21 initiating maintenance activities requiring high-profile equipment to assess whether a site  
22 investigation is necessary. If a site investigation is performed, project proponents would adhere to  
23 Caltrans' recommendations in order to avoid any adverse effects on air safety. Finally, construction  
24 occurring within 10,000 feet of a public airport may be subject to an OE/AAA to be performed by the  
25 FAA. Compliance with the results of the OE/AAA would reduce the risk for adverse effects on air  
26 traffic safety. Potential safety hazards to air traffic related to the potential for increased bird-aircraft  
27 strikes as a result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

28 The potential for conservation component implementation to result in or be subject to substantial  
29 risk of wildfires is possible, but the risk is expected to be low because many of the activities would  
30 be located in or near Delta waterways and adjacent to managed agricultural land. Additionally,  
31 construction activities would be managed using standard construction practices to reduce the  
32 potential for creating wildfires. Precautions would be taken to prevent wildland fires during  
33 construction, and operation and maintenance of the conservation measures would be done in full  
34 compliance with Cal-OSHA standards for fire safety and prevention. Additionally, in an effort to  
35 reduce the potential for fire hazards, the project proponents would develop and implement BMPs  
36 (described under Impact HAZ-5 for this alternative and in Appendix 3B, *Environmental*  
37 *Commitments, AMMs, and CMs*) under a FPCP, in coordination with federal, state, and local agencies,  
38 as part of the environmental commitments.

39 In summary, as described above, implementation of CM2–CM11, CM13, CM14, CM16, CM18 and  
40 CM19 could result in multiple potentially hazardous effects related to the release of or exposure to  
41 hazardous materials or other hazards including increased production, mobilization and  
42 bioavailability of methylmercury; release of existing contaminants (e.g., pesticides in agricultural  
43 land); air safety hazards; and wildfires. These effects, were they to occur, would be considered  
44 adverse. However, this alternative has incorporated environmental commitments (as described  
45 above) to avoid, reduce and/or minimize these potential hazardous effects on the public and the  
46 environment. Further, implementation of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and

1 TRANS-1a are available to further reduce/minimize many of these potential effects to ensure that  
2 they would not be adverse. Therefore, there would be no adverse effect.

3 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
4 public to hazardous substances or conditions during construction, operation, and maintenance of  
5 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
6 implementation would involve extensive use of heavy equipment during construction, and/or the  
7 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
8 for nonnative vegetation control). These chemicals could be inadvertently released and could expose  
9 construction workers or the public to hazards. Construction of restoration projects on or near  
10 existing agricultural and industrial land and/or SOCs may result in a conflict or exposure to known  
11 hazardous materials. The use of high-profile equipment (i.e., 200 feet or higher) in close proximity to  
12 airport runways could result in safety hazards to air traffic. These effects, were they to occur, would  
13 result in a significant impact. However in addition to implementation of SWPPPs, HMMPs, SPCCPs,  
14 SAPs, and fire prevention and fire control BMPs as part of a FPCP, Mitigation Measures HAZ-1a, HAZ-  
15 1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would ensure that there would  
16 be no substantial hazards to the public or the environment due to implementation of the  
17 conservation measures. As such, this impact would be less than significant.

18 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
19 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
20 **Construction Footprint, and Remediate and/or Contain Contamination**

21 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1.

22 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
23 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
24 **Dispose of Them in Accordance with Applicable Regulations**

25 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1.

26 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

27 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
28 Chapter 20, *Public Services and Utilities*.

29 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
30 **Minimizes Any Effect on Worker and Public Health and Safety**

31 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
32 Chapter 20, *Public Services and Utilities*.

33 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
34 **Plan**

35 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
36 1A in Chapter 19, *Transportation*.

1 **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 2 **Conservation Measures that Create or Improve Wildlife Habitat**

3 **NEPA Effects:** Implementation of CM2–CM11, measures which would create or improve wildlife  
 4 habitat and therefore, potentially attract waterfowl and other birds to areas in proximity to existing  
 5 airport flight zones, could increase the opportunity for bird-aircraft strikes, which could result in  
 6 impacts on public safety. The following airports, because they are in relatively close proximity  
 7 (within 2 miles) to the ROAs and/or conservation zones could potentially be affected: Travis Air  
 8 Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International Airport, and  
 9 Byron Airport.

10 The FAA funds research and mitigation development, including a bird strike database managed by  
 11 the Wildlife Services Program of the U.S. Department of Agriculture under terms of an interagency  
 12 agreement. The database currently contains data from January 1990 through August 2008,  
 13 recording over 100,000 wildlife strikes. Based on these data, most bird strikes occur during daylight  
 14 hours between July and October when aircraft are approaching and landing. Most bird strikes (92%)  
 15 occur at or below 3,000 feet altitude. Since 1990, 52 U.S. civil aircraft were either destroyed or  
 16 damaged beyond repair due to wildlife strikes, accounting for 23 fatalities. The FAA discourages the  
 17 improvement of wildlife habitat in proximity to public-use airports to lessen the risk of bird-aircraft  
 18 strikes. If restoration actions are located within 5,000 feet of airports used by propeller-driven  
 19 aircraft or within 10,000 feet of those used by jet-driven aircraft (known as the Critical Zone), the  
 20 risk of bird-aircraft strikes would likely increase. The FAA recommends that these distances be  
 21 maintained between the Air Operations Area (AOA) and land uses deemed incompatible with safe  
 22 airport operations (i.e., hazardous wildlife attractants), including agriculture, water management  
 23 facilities, and active wetlands. Public use airports within the study area are located in areas of mixed  
 24 land uses. Some are located in proximity to urban uses, but all are located within 5 miles of  
 25 substantial existing agricultural lands and wetlands. Thus, all of the public use airports in the study  
 26 area are currently located in areas with existing wildlife hazards. The effect of increased bird-  
 27 aircraft strikes during implementation of CM2–CM11 would be adverse because it could potentially  
 28 result in an air and public safety hazard. Mitigation Measure HAZ-8 would reduce the severity of this  
 29 effect through the development and implementation of measures to reduce, minimize and/or avoid  
 30 wildlife hazards on air safety. However, this effect is would remain adverse.

31 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 32 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 33 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 34 significant impacts on public safety. Airports that could be potentially affected would include Travis  
 35 Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International Airport;  
 36 and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact through the  
 37 ultimate development of implementation of measures to reduce, minimize and/or avoid wildlife  
 38 hazards on air safety, but not to a less-than-significant level. As such, the impact is significant and  
 39 unavoidable.

40 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 41 **Regulatory Agencies**

42 The FAA requires commercial service airports to maintain a safe operation, including  
 43 conducting hazard assessments for wildlife attractants within 5 miles of an airport. The hazard  
 44 assessment is submitted to FAA, which determines if the airport needs to develop a Wildlife

1 Hazard Management Plan (15 CFR Part 139). The airport’s Wildlife Hazard Management Plan  
 2 contains measures to reduce wildlife hazards, including habitat modification (e.g., vegetation  
 3 management, filling in of wetlands), wildlife control measures (e.g., harassment, trapping and  
 4 removing), and use of a radar-based alert system.

5 Project proponents will consult with the individual airports and USFWS during the design  
 6 process for individual restoration activities, when site-specific locations and design plans are  
 7 finalized. At that time, appropriate management plans, strategies, and protocols would be  
 8 developed to reduce, minimize and/or avoid wildlife hazards on air safety. Site-specific  
 9 measures will be developed once information on the design, location, and implementation of  
 10 CM2–CM11 is sufficient to permit a project-level analysis.

11 This mitigation measure will ensure that the potential for increased bird–aircraft strikes as a  
 12 result of implementing CM2–CM11 in the vicinity of airports is minimized to the greatest extent  
 13 possible.

### 14 **24.3.3.3 Alternative 1B—Dual Conveyance with East Alignment and Intakes** 15 **1–5 (15,000 cfs; Operational Scenario A)**

#### 16 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the** 17 **Release of Hazardous Materials or by Other Means during Construction of the Water** 18 **Conveyance Facilities**

19 **NEPA Effects:** Hazards to the public or the environment through the routine transport, use, or  
 20 disposal of hazardous materials during construction of the water conveyance facilities for Alternative  
 21 1B would be similar to those described under Alternative 1A. However, there would be differences  
 22 in potential locations of effects related to the eastern alignment of this alternative. Because canals  
 23 would be the primary means of water conveyance (although shorter tunnels would be constructed  
 24 at river and slough crossings), construction may present a greater potential for surface effects  
 25 related to hazards and hazardous materials than the Alternative 1A tunnel conveyance. Further,  
 26 there would be no intermediate forebay constructed under Alternative 1B.

27 As described in Chapter 3, *Description of Alternatives*, six locations would be designated as  
 28 temporary fuel stations during construction of Alternative 1B. Each fuel station would occupy 2  
 29 acres and each would be located adjacent to a concrete batch plant. Fuel station locations are shown  
 30 in Figure 24-7 and in Figure M3-2 in the Mapbook Volume. Six fuel stations would be established in  
 31 currently rural areas with two at the intakes on the northern end of the conveyance alignment—one  
 32 would be located less than 0.5 mile northwest of Intake 2, just east of SR 160 across the Sacramento  
 33 River from Clarksburg, and the other would be located between Intakes 4 and 5, southeast of SR  
 34 160. Three other fuel stations would be located along the length of the canal alignment (one  
 35 approximately 2 miles northeast of Locke, one on northeastern King Island, and one approximately  
 36 1 mile southwest of Holt) and one fuel station would be located less than 1 mile southeast of Clifton  
 37 Court Forebay, near the intersection of the Byron Highway and Mountain House Road on the  
 38 southern end of the conveyance. For a map of all permanent facilities associated with this  
 39 conveyance alignment, see Figure M3-2 in the Mapbook Volume. Bulk fuel would be stored at fuel  
 40 stations and potentially pose the risk of vehicle fueling spills and leakage from above-ground  
 41 storage tanks at fuel stations.

1 Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil,  
2 sediment or groundwater, hazardous constituents present in RTM, infrastructure containing  
3 hazardous materials, and the disruption of existing hazardous materials transport routes would be  
4 similar to those described under Alternative 1A. However, the locations and extent of these hazards  
5 would be different than under Alternative 1A. For example, RTM would consist of materials  
6 excavated from the tunnel bores and inverted siphons where the canal alignment intersects river  
7 and slough crossings. The tunnel bores for Alternative 1B would be 1,400–5,022 feet long and  
8 advanced at a depth of approximately 160 feet bgs at these locations. There would be approximately  
9 23.5 million cubic yards less RTM under this alternative than under Alternative 1A. In addition,  
10 there are 13 overhead power/electrical transmission lines, 5 natural gas pipelines (Table 24-3), 4  
11 petroleum product lines (Table 24-3 and Figure 24-3), and 57 inactive and 4 active oil or gas wells  
12 (Figure 24-5) within the proposed water conveyance facilities construction footprint of Alternative  
13 1B. The precise location of pipelines would be identified prior to construction to avoid conflicts with  
14 construction. Abandoned wells would be tested to confirm that they have been abandoned  
15 according to DOGGR well abandonment requirements. Those wells not abandoned according to  
16 these requirements will be improved. In addition, to avoid the potential conflicts with shaft  
17 construction and disposal areas, the utility and infrastructure relocation will be coordinated with  
18 local agencies and owners.

19 There are also a number of locations where residential, agricultural and commercial structures lie  
20 within the Alternative 1B water conveyance facilities footprint. Approximately 409 permanent  
21 structures would be removed or relocated within the water conveyance facility footprint under this  
22 alternative. This includes approximately 109 residential buildings. Other structures affected would  
23 consist primarily of storage or agricultural support facilities (257), 22 recreational facilities, and 21  
24 other structures (e.g., power/utility structures, bridges, and other types of infrastructure). One fire  
25 station in the community of Hood would also be affected. These structures may contain hazardous  
26 materials (e.g., agricultural or other hazardous chemicals, asbestos, lead paint) that would require  
27 proper handling and disposal, if demolition is necessary. As described for Impact HAZ-1 under  
28 Alternative 1A, Mitigation Measure HAZ-1b would be implemented by DWR to ensure that there are  
29 no adverse effects related to structure demolition due to hazardous materials.

30 Risks associated with the transportation of hazardous materials via trucks, trains, and ships would  
31 be similar to those described under Alternative 1A but would occur in different areas. Two  
32 designated hazardous materials transportation routes, State Highways 4 and 12, cross the  
33 Alternative 1B construction footprint (Figure 24-2 and in Table 24-4). It is not anticipated that  
34 traffic on these highways will need to be rerouted. Routes anticipated to be affected during  
35 construction of the water conveyance facilities are described in Chapter 19, *Transportation*. As  
36 described in Chapter 19, *Transportation*, under Mitigation Measure TRANS-1a, a site-specific  
37 construction traffic management plan, taking into account land (including rail) and marine  
38 hazardous materials transportation, would be prepared and implemented prior to initiation of  
39 water conveyance facilities construction. Mitigation Measure TRANS-1a includes stipulations to  
40 avoid or reduce potential circulation effects, such as such as providing signage, barricades, and flag  
41 people around construction work zones; notifying the public, including schools and emergency  
42 service providers of construction activities that could affect transportation; providing alternate  
43 access routes, if necessary, to maintain continual circulation in and around construction zones; and  
44 requiring direct haulers to pull over in the event of an emergency. This mitigation measure would  
45 reduce the potential for effects on hazardous materials transportation routes in the study area. The  
46 Alternative 1B water conveyance facilities alignment would cross one railroad right-of way (ROW)

1 at the BNSF Railway/Amtrak line in San Joaquin County near Holt. Maintaining freight and  
2 passenger service on the BNSF railroad line with canal construction would be achieved by way of a  
3 siphon to be constructed under the railroad. Construction of the siphon may temporarily affect  
4 BNSF/Amtrak railroad operations. Two segments of a UPRR line would intersect with bridge  
5 facilities constructed east of the intake facilities, and other construction work areas would be  
6 immediately adjacent to an out-of-service UPRR Tracy Subdivision branch line, near the California  
7 Aqueduct at the southern end of the water conveyance facilities. If the out-of-service UPRR line were  
8 reopened prior to construction, the continuity of rail traffic, and thus the potential for hazards  
9 associated w/upset of hazardous materials transportation on this line, could be managed through  
10 implementation of Mitigation Measure TRANS-1a. Mitigation Measure TRANS-1a would include  
11 stipulations to coordinate with rail providers to develop alternative interim transportation modes  
12 (e.g., trucks or buses) that could be used to provide freight and/or passenger service during any  
13 longer term railroad closures and daily construction time windows during which construction  
14 would be restricted or rail operations would need to be suspended for any activity within railroad  
15 rights of way. This would minimize the potential risk of release of hazardous materials being  
16 transported via these rails. Under this alternative barge traffic would occur primarily in the San  
17 Joaquin River. Increased barge traffic related to delivery of materials to the project site is not  
18 anticipated to cause impediments to the passage of other vessels. Although some in-water work  
19 would be necessary for intake construction along the Sacramento River, the river would remain  
20 open to boat traffic at all times during construction, and the width of the river near the intakes  
21 (approximately 500–700 feet) would allow for passage of the types of boats typically observed on  
22 the Sacramento River. However, barges supporting water conveyance facilities construction may  
23 also transport hazardous materials such as fuels and lubricants or other chemicals. The potential  
24 exists for accidental release of hazardous materials from project-related barges. To avoid effects on  
25 the environment related to this issue, BMPs implemented as part of a Barge Operations Plan (for  
26 detail see Appendix 3B, *Environmental Commitments, AMMs, and CMs*), as discussed under Impact  
27 HAZ-1 for Alternative 1A would avoid and/or minimize this potential adverse effect.

28 In summary, during construction of the water conveyance facilities, the potential would exist for  
29 direct effects on construction personnel, the public and/or the environment associated with a  
30 variety of potentially hazardous conditions because of the intensity of construction activities at the  
31 north Delta intakes, Byron Tract Forebay, conveyance features (e.g., siphons, canals, tunnels), and  
32 the hazardous materials that would be used in these areas. Many of these activities would occur in  
33 close proximity to the town of Hood, and would involve multiple years of use of hazardous  
34 construction materials. Additionally, large-scale construction activities involving the use of  
35 hazardous materials would be located in and near water bodies. Potential hazards include the  
36 routine transport, use or disposal of hazardous materials; natural gas accumulation in water  
37 conveyance tunnels; the inadvertent release of existing contaminants in soil and groundwater, or  
38 hazardous materials in existing infrastructure to be removed; disturbance of electrical transmission  
39 lines; and hazardous constituents present in RTM. Additionally, there is the potential for the  
40 construction of the water conveyance facilities to indirectly result in the release of hazardous  
41 materials through the disruption of existing road, rail, or river hazardous materials transport routes  
42 because construction would occur in the vicinity of three hazardous material transport routes, three  
43 railroad corridors, and waterways with barge traffic and would require construction traffic that  
44 could disrupt these routes. These potential effects are considered adverse because they would  
45 potentially result in direct exposure of the public (including construction personnel), and surface  
46 water and groundwater to physical and/or chemical hazards as discussed.

1 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design will minimize, to  
2 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
3 is suspected or has been verified. Additionally, environmental commitments would be implemented,  
4 including, SWPPPs, SPCCPs, HMMPs, and SAPs; a Barge Operations Plan; and chemical  
5 characterization of RTM and decant liquid prior to reuse (e.g., RTM in levee reinforcement) or  
6 discharge, which together would help reduce these potential hazards associated with water  
7 conveyance facilities construction. Finally, the implementation of Mitigation Measures HAZ-1a and  
8 HAZ-1b; UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
9 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact,  
10 as described for Impact HAZ-1 for Alternative 1A. As such, construction of the water conveyance  
11 facilities would not create a substantial hazard to the public or the environment through the routine  
12 transport, use, or disposal of hazardous materials or the upset/accidental release of these materials.  
13 Therefore, this effect would not be adverse.

14 **CEQA Conclusion:** During construction of the water conveyance facilities, the potential would exist  
15 for direct significant impacts on construction personnel, the public and/or the environment  
16 associated with a variety of hazardous physical or chemical conditions. Such conditions may arise as  
17 a result of the intensity and duration of construction activities at the north Delta intakes, Byron  
18 Tract Forebay, conveyance pipelines, and tunnels, and because of the hazardous materials that  
19 would be used in these areas during construction. Potential hazards include the routine use of  
20 hazardous materials (as defined by Title 22 of the California Code of Regulations, Division 4.5);  
21 natural gas accumulation in water conveyance tunnels; the inadvertent release of existing  
22 contaminants in soil, sediment and groundwater, or hazardous materials in existing infrastructure  
23 to be removed; disturbance of electrical transmission lines; and potentially hazardous constituents  
24 present in RTM. Many of these physical and chemical hazards would occur in close proximity to the  
25 town of Hood during construction of the north Delta intakes. Additionally, the potential would exist  
26 for the construction of the water conveyance facilities to indirectly result in the release of hazardous  
27 materials through the disruption of existing road, rail, or river hazardous materials transport routes  
28 because construction would occur in the vicinity of three hazardous material transport routes, three  
29 railroad corridors, and waterways with barge traffic, and would require construction traffic that  
30 could disrupt these routes. For these reasons, this is considered a significant impact. However, with  
31 the implementation of the previously described environmental commitments and Mitigation  
32 Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and*  
33 *Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the water  
34 conveyance facilities would not create a substantial hazard to the public or the environment through  
35 the routine transport, use, or disposal of hazardous materials or the upset/accidental release of  
36 these materials. The severity of this impact would be reduced with the implementation of these  
37 environmental commitments and mitigation measures by identifying and describing potential  
38 sources of hazardous materials so that releases can be avoided and materials can be properly  
39 handled; detailing practices to monitor pollutants and control erosion so that appropriate measures  
40 are taken; implementing onsite features to minimize the potential for hazardous materials to be  
41 released to the environment or surface waters; minimizing risk associated with the relocation of  
42 utility infrastructure; and coordinating the transport of hazardous materials to reduce the risk of  
43 spills. Accordingly, this impact would be less than significant.

1       **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2       **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3       **Construction Footprint, and Remediate and/or Contain Contamination**

4       Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5       1A.

6       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8       **Dispose of Them in Accordance with Applicable Regulations**

9       Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10      1A.

11      **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12      Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13      Chapter 20, *Public Services and Utilities*.

14      **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15      **Minimizes Any Effect on Worker and Public Health and Safety**

16      Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17      Chapter 20, *Public Services and Utilities*.

18      **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19      **Plan**

20      Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21      1A in Chapter 19, *Transportation*.

22      **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 23      **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 24      **Facilities**

25      **NEPA Effects:** There are no schools or hospitals within 0.25 mile of Alternative 1B. However,  
 26      Buckley Cove Park and Nelson Park, both in Stockton, are within 0.25 mile of the construction  
 27      footprint of Alternative 1B. Buckley Cove Park is west of a proposed borrow and/or spoils area  
 28      across the Stockton Deep Water Ship Channel, and Nelson Park is just north of a proposed  
 29      temporary 69-kV transmission line. Because large construction equipment, such as dump trucks,  
 30      excavators, back hoes, and potentially cranes (for the installation of the transmission line) could be  
 31      operated in these areas, there could be the potential for oil leakage from these vehicles. However, if  
 32      this were to occur, it would be localized and minimal. Furthermore, environmental commitment  
 33      measures (Appendix 3B, *Environmental Commitments, AMMs, and CMs*) implemented as part of the  
 34      HMMPs, SPCCPs, and SWPPPs, including positioning all stationary equipment over drip pans, and  
 35      immediately cleaning up spills and leaks and disposing of properly, would ensure that equipment  
 36      leaks are contained and remediated. Further, although Buckley Cove Park and Nelson Park are  
 37      within 0.25 mile of the a borrow/spoils area and a proposed transmission line, respectively, the  
 38      parks are not in close enough proximity to the associated construction areas to be affected by  
 39      potential hazards such as minor leaks or spills of hazardous materials as may occur with the

1 construction activities. Therefore, people at these parks would not be at risk or adversely affected by  
2 exposure to hazardous materials, substances, or waste during construction of the water conveyance  
3 facilities. As such, there would be no adverse effect on sensitive receptors. Potential air quality  
4 effects on sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*, and  
5 potential EMF effects on sensitive receptors are discussed in Chapter 25, *Public Health*.

6 **CEQA Conclusion:** Buckley Cove and Nelson Parks in Stockton are within 0.25 mile of the  
7 construction footprint of Alternative 1B. Buckley Cove Park is west of a proposed borrow and/or  
8 spoils area across the Stockton Deep Water Ship Channel, and Nelson Park is just north of a  
9 proposed temporary 69-kV transmission line. Heavy construction equipment, such as dump trucks,  
10 diggers, back hoes, and potentially cranes, would be operating in these areas during construction,  
11 and there would be the potential for these vehicles to leak oil. However, if this were to occur, the  
12 leaks would be localized and minimal. Furthermore, environmental commitment measures  
13 (Appendix 3B, *Environmental Commitments, AMMs, and CMs*) implemented as part of the HMMs,  
14 SPCCPs, and SWPPPs, including positioning all stationary equipment over drip pans, and  
15 immediately cleaning up spills and leaks and disposing of properly, will ensure that equipment leaks  
16 are contained and remediated. In addition, although Buckley Cove and Nelson Parks are within 0.25  
17 mile of a proposed borrow/spoils area and a proposed temporary 69-kV transmission line,  
18 respectively, these parks are not in close enough proximity to these construction areas to be affected  
19 by potential hazards such as minor leaks or spills of hazardous materials as may occur with the  
20 construction activities. Therefore, people at these parks would not be at risk or affected by exposure  
21 to hazardous materials, substances, or waste during construction of the water conveyance facilities,  
22 and as such, this impact would be less than significant. No mitigation is required. Potential air  
23 quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*,  
24 and potential EMF effects on sensitive receptors are discussed in Chapter 25, *Public Health*.

25 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
26 **Create a Significant Hazard to the Public or the Environment**

27 **NEPA Effects:** Effects related to SOCs would be similar to those described under Alternative 1A.  
28 Figure 24-4 shows the location of SOCs and “Cortese List” sites with respect to the Alternative 1B  
29 construction footprint, and sites in and within 0.5 mile of the construction footprint are identified in  
30 Table 24-5. For those hazardous materials sites identified within the 0.5-mile radius but which are  
31 not within the construction footprint, there would be no potential for the construction of the water  
32 conveyance facilities to disturb those sites such that there would be a re-release of hazardous  
33 materials that would create a hazard for the public or environment.

34 The Kinder Morgan Energy pipeline access station, an SOC in Stockton, is within the construction  
35 footprint of a proposed temporary 69-kV transmission line for this alternative. Similarly, the Sarale  
36 Farms site (a “Cortese List” site) is located within the construction footprint of a proposed  
37 temporary 69-kV transmission line at the southern end of the water conveyance facilities alignment,  
38 approximately 1.5 miles east of Clifton Court Forebay (Figure 24-4 and Figure M3-2 in the Mapbook  
39 Volume). A 10,000-gallon petroleum UST was removed from the Sarale Farms site in 1992; soil and  
40 groundwater contain petroleum products in excess of cleanup standards. The San Joaquin County  
41 Environmental Health Department issued a letter in December 2008 requiring continued  
42 monitoring of groundwater and additional assessment of groundwater for petroleum.

1 Construction activities on or in close proximity to the Sarale Farms site could result in the re-release  
2 of petroleum products, either airborne soil during excavation activities, or by encountering  
3 contaminated groundwater during dewatering activities or deep excavation. Because construction  
4 of the temporary transmission line would not entail deep excavation or require dewatering  
5 activities, no conflict with existing hazards at this site are anticipated. However, if dewatering  
6 and/or deep excavation were required in this area contaminated groundwater could be drawn up  
7 and/or contaminated soils may be disturbed, respectively. Improper disposal of contaminated  
8 excavated soils or groundwater would have the potential to adversely affect the environment. To  
9 avoid this potential adverse effect, Mitigation Measure HAZ-1a would be implemented to ensure that  
10 any known or suspected soil and/or groundwater contamination is not re-released. Further, design  
11 of the transmission line, including pole placement, would avoid the Kinder Morgan Energy and  
12 Sarale Farms sites to the extent practicable to ensure there were no adverse hazardous effects  
13 associated with construction on or in close proximity to these sites.

14 For those hazardous materials sites identified within the 0.5-mile radius but which are not within  
15 the construction footprint, there would be no potential for the construction of the water conveyance  
16 facilities to disturb those sites such that there would be a re-release of hazardous materials that  
17 would create a hazard for the public or environment. Therefore, this effect would not be adverse.  
18 The potential for encountering unknown hazardous materials sites during the course of  
19 construction is discussed under Impact HAZ-1, above.

20 **CEQA Conclusion:** The re-release of hazardous materials during construction (dewatering and/or  
21 deep excavation) at the Sarale Farms site or the Kinder Morgan Energy pipeline access station site  
22 within the construction footprints for proposed temporary 69-kV transmission lines could result in  
23 a significant impact if contaminated groundwater and/or soils were rereleased. However, a  
24 significant impact on the environment would be avoided with implementation of Mitigation Measure  
25 HAZ-1a, which would identify and describe potential sources of hazardous materials so that releases  
26 can be avoided and materials can be properly handled. Further, project design would minimize, to  
27 the extent feasible, the need to traverse areas where the presence of hazardous materials is  
28 suspected or has been verified, or where interference with existing infrastructure might result in  
29 hazards. As a result, there would be a less-than-significant impact on the public and/or environment  
30 because construction of the water conveyance facilities near the Kinder Morgan Energy pipeline  
31 access station site and the Sarale Farms site would not result in hazardous materials releases from  
32 these sites. The potential for encountering other unknown hazardous materials sites during the  
33 course of construction is discussed under Impact HAZ-1, above.

34 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
35 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
36 **Construction Footprint, and Remediate and/or Contain Contamination**

37 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
38 1A. Implementation of this mitigation measure will result in the avoidance, successful  
39 remediation or containment of all known or suspected contaminated areas, as applicable, within  
40 the construction footprint, which would prevent the release of hazardous materials from these  
41 areas into the environment.

1 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
2 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
3 **Study Area during Construction of the Water Conveyance Facilities**

4 **NEPA Effects:** Development around an airport, particularly in the approach and departure paths, can  
5 create obstructions in the airspace traversed by an approaching or departing aircraft. Additionally,  
6 certain land uses have the potential to create hazards to aircraft such as a distracting glare, smoke,  
7 steam, or invisible heat plumes. Safety impacts from aircraft accidents near airports are typically  
8 avoided by specifying the types of land uses allowed, and thereby limiting the number of people who  
9 would be exposed to the risk of an accident, and avoiding land uses that could create hazards to air  
10 traffic. Airspace protection primarily involves limitations on the height of objects on the ground near  
11 airports.

12 As shown in Figure 24-9, the Borges-Clarksburg Airport, Byron Airport, and Lost Isle Seaplane Base  
13 are within 2 miles of the Alternative 1B water conveyance facilities. The Borges-Clarksburg Airport  
14 is a private, special-use airport less than 0.5 mile northeast of the construction footprint for Intake 1.  
15 The Lost Isle Seaplane Base, on Spud Island, is within 2 miles of the proposed permanent 69-kV  
16 transmission line. Byron Airport is within 2 miles of the construction footprints for the following  
17 proposed water conveyance features: Byron Tract forebay; a borrow and/or spoils area south of  
18 Clifton Court Forebay; a temporary 12-kV transmission line; and a permanent 230-kV transmission  
19 line. The Lost Isle Seaplane Base and Byron Airport are public use airports and are subject to FAA  
20 regulations regarding construction within 10,000 feet. Additionally, construction of a state building  
21 or enclosure within 2 miles of any airport is subject to review of Caltrans' Division of Aeronautics for  
22 safety and noise effects. With the exception of the proposed transmission lines, construction of these  
23 features or work in these areas would not require the use of high-profile construction equipment.  
24 Because construction of the proposed transmission lines would potentially require high-profile  
25 equipment (e.g., cranes), and because construction of the 230-kV transmission line would require  
26 the use of helicopters during the stringing phase, the safety of air traffic arriving or departing from  
27 either of these airports could be compromised during construction of the proposed transmission  
28 lines.

29 In the event final locations for any state building or enclosure are within 2 miles of any airport,  
30 Caltrans' Division of Aeronautics would require written notification and a review would be  
31 performed; DWR would comply with Caltrans' recommendations (e.g., marking and/or lighting of  
32 temporary or permanent structures exceeding an overall height of 200 feet above ground level)  
33 based on this review to ensure there are no adverse effects on air safety. Further, depending on the  
34 location and height of any high-profile construction equipment or structures (e.g., proposed  
35 transmission lines and towers) relative to the Lost Isle Seaplane Base and Byron Airport, because  
36 they are public air facilities, the BDCP may be subject to an OE/AAA to be performed by the FAA (14  
37 CFR Part 77), as discussed under Impact HAZ-4 for Alternative 1A. Compliance with the results of  
38 the OE/AAA would also reduce the risk of adverse effects on air safety. As such, there would be no  
39 adverse effects on air safety.

40 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
41 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
42 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
43 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
44 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
45 is operated too close to runways. Two public airports (Lost Isle Seaplane Base and Byron Airport)

1 and one private airport (Borges-Clarksburg Airport) are located within 2 miles of the construction  
 2 footprint of Alternative 1B. DWR would coordinate with Caltrans' Division of Aeronautics prior to  
 3 initiating construction and comply with its recommendations based on its investigation(s), as well  
 4 comply with the recommendations of the OE/AAA (for Byron Airport and the Lost Isle Seaplane  
 5 Base), impacts on air safety would be less than significant. These recommendations, which could  
 6 include limitations necessary to minimize potential problems such as the use of temporary  
 7 construction equipment, supplemental notice requirements, and marking and lighting high-profile  
 8 structures, would reduce the potential for impacts on air safety. Accordingly, this impact would be  
 9 less than significant. No mitigation is required.

10 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 11 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 12 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 13 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

14 *NEPA Effects:* Hazards related to wildland fires would be similar to those described under  
 15 Alternative 1A. The northernmost and southernmost extent of this conveyance alignment, where  
 16 fuel stations and the Byron Tract Forebay would be constructed, would be adjacent to zones of  
 17 moderate fire hazard severity (Figure 24-10).

18 As described under Impact HAZ-5 for Alternative 1A and in Appendix 3B, *Environmental*  
 19 *Commitments, AMMs, and CMs*, fire prevention and control measures would be implemented, as part  
 20 of a FPCP, during construction, and operation and maintenance of the water conveyance facilities in  
 21 full compliance with Cal-OSHA standards for fire safety and prevention. Because development and  
 22 implementation of measures under the FPCP would help ensure that people or structures would not  
 23 be subject to a substantial risk of loss, injury or death involving wildland fires, and because the  
 24 proposed water conveyance facilities would not be located in a High or Very High Fire Hazard  
 25 Severity Zone, this effect would not be adverse.

26 *CEQA Conclusion:* People or structures would not be subject to a substantial risk of loss, injury or  
 27 death involving wildland fires during construction or operation and maintenance of the water  
 28 conveyance facilities because the BDCP would comply with Cal-OSHA fire prevention and safety  
 29 standards; DWR would implement standard fire safety and prevention measures, as part of a FPCP;  
 30 and because the water conveyance facilities would not be located in a High or Very High Fire Hazard  
 31 Severity Zone. Therefore, this impact would be less than significant. No mitigation is required.

32 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 33 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 34 **Water Conveyance Facilities**

35 *NEPA Effects:* Potential hazards related to the long-term operation and maintenance of the water  
 36 conveyance facilities would be similar to those described for Alternative 1A, particularly with  
 37 respect to intakes and intake pumping plants. This alternative may require the transport, storage,  
 38 and use of chemicals or hazardous waste materials including fuel, oils, grease, solvents, and paints.  
 39 Solids collected at the solids lagoons, and dredged sediment from around the intakes may contain  
 40 hazardous constituents (e.g., persistent pesticides, mercury, PCBs).

41 Under Alternative 1B, differences in potential hazards relative to Alternative 1A could generally  
 42 result from variations in operational and maintenance activities with respect to canals, culvert  
 43 siphons, and control structures along this water conveyance facilities alignment. However, the

1 potential for hazards associated with operation and maintenance of tunnel segments and those  
2 relating to the intermediate forebay would be decreased because only short tunnel segments under  
3 existing channels would be operated and maintained and because this alternative would not include  
4 an intermediate forebay.

5 As noted above (Impact HAZ-4 for this alternative), the Borges-Clarksburg Airport, Byron Airport  
6 and Lost Isle Seaplane Base are within 2 miles of the Alternative 1B water conveyance facilities.  
7 With the exception of the proposed power transmission lines and towers, water conveyance  
8 facilities are not anticipated to require the use of high-profile equipment during operations and  
9 maintenance. Depending on the location and height (i.e., 200 feet or taller) of any equipment  
10 necessary for transmission line maintenance, the Lost Isle Seaplane Base and Byron Airport, because  
11 they are public air facilities, would be subject to an OE/AAA to be performed by the FAA. Compliance  
12 with the results of the OE/AAA, as well as any applicable FAA regulations regarding potential  
13 obstructions to air navigation (14 CFR Part 77) would reduce the risk of adverse effects on air  
14 safety. Additionally, DWR would coordinate with Caltrans' Division of Aeronautics prior to any  
15 maintenance activities requiring high-profile maintenance equipment and comply with any air  
16 safety recommendations Caltrans may have to ensure that there is no conflict with or adverse effect  
17 on air traffic. Compliance with the results of the OE/AAA would reduce the risk for adverse effects  
18 on air traffic safety by implementing recommendations which could include limitations necessary to  
19 minimize potential problems, supplemental notice requirements, and marking and lighting high-  
20 profile structures. Thus, there would be no adverse effects on air safety.

21 Potential releases of hazardous materials, if released in substantial quantities, associated with  
22 operations and maintenance of the water conveyance facilities under this alternative could result in  
23 an adverse effect on workers, the public (including sensitive receptors within 0.25 mile of the  
24 construction footprint), and the environment. As indicated under Impact HAZ-2 for this alternative,  
25 Buckley Cove and Nelson Parks in Stockton are within 0.25 mile of a proposed borrow/spoils area  
26 and a proposed temporary 69-kV transmission line, respectively. Because the proposed 69-kV  
27 transmission line is temporary, it would be removed following completion of the water conveyance  
28 facilities, and therefore no maintenance activities would occur in this area. No maintenance  
29 activities would take place in the borrow/spoils area, per se; however, should the spoils be used at  
30 some later time, heavy construction equipment such as dump trucks and excavators would be  
31 needed to move the spoils. Consequently there could be the potential for oil leakage from these  
32 vehicles. However, if this were to occur, it would be localized and minimal. Furthermore,  
33 environmental commitment measures (Appendix 3B, *Environmental Commitments, AMMs, and CMs*)  
34 implemented as part of the HMMPs, SPCCPs, and SWPPPs, including positioning all stationary  
35 equipment over drip pans, and immediately cleaning up spills and leaks and disposing of properly,  
36 will ensure that equipment leaks are contained and remediated. Other water conveyance features  
37 such as the intakes. There would be a risk of accidental spills of hazardous materials (e.g., fuels,  
38 solvents, paints, pesticides and herbicides) during facility operations and maintenance, such as  
39 painting the intake and intermediate pumping plants, maintaining pumps at the intake and  
40 intermediate pumping plants, and applying pesticides and herbicides to the landscaped areas at the  
41 pumping plants. However, the quantities of hazardous materials likely to be used during these types  
42 of routine operations and maintenance activities are likely to be small, and, were they to be released  
43 inadvertently, they would be localized. Such spills could result in minor, temporary potential  
44 hazards to workers immediately adjacent to these releases; however, environmental commitment  
45 measures implemented as part of the HMMPs, SPCCPs, and SWPPPs, including equipping facility  
46 buildings with spill containment and cleanup kits; ensuring that hazardous materials containment

1 containers are clearly labeled with identity, handling and safety instructions, and emergency contact  
2 information; and requiring that personnel be trained in emergency response and spill containment  
3 techniques, would minimize the potential for the accidental release of hazardous materials and  
4 would help contain and remediate hazardous spills should they occur. Therefore, operation and  
5 maintenance workers, the public (including sensitive receptors within 0.25 mile of the construction  
6 footprint), and the environment would not be at risk or adversely affected by hazardous materials  
7 due to the proximity of the park to the water conveyance facilities.

8 Sediment and solids removal from the sedimentation basins and solids lagoons, respectively, and  
9 removal of accumulated sediment at the face of the intakes is expected to be an ongoing process  
10 during operation of the water conveyance facilities. To ensure that potentially contaminated  
11 sediment from maintenance dredging activities at the intakes would not adversely affect soil,  
12 groundwater or surface water, a SAP would be implemented prior to any dredging activities, as  
13 described under Impact HAZ-1 for this alternative. All sediment would be characterized chemically  
14 prior to reuse to ensure that reuse of this material would not result in a hazard to the public or the  
15 environment. Accordingly, there would be no adverse effect.

16 The annual volume of solids under this alternative is anticipated to be 486,000 cubic feet (dry solids  
17 basis). Sediment and dewatered solids may contain hazardous constituents such as persistent  
18 pesticides and mercury that could pose a hazard to the environment if improperly disposed of,  
19 which would be considered an adverse effect. However, implementation of Mitigation Measure HAZ-  
20 6 would require the sampling and characterization of dewatered solids prior to reuse or disposal in  
21 order to evaluate disposal/reuse options to avoid adverse effects on soil, groundwater or surface  
22 water as a result of improper disposal of potentially contaminated lagoon solids.

23 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
24 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
25 substantial hazard to the public or the environment and there would be no adverse effect.

26 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
27 operation and maintenance of the water conveyance facilities and the potential interference with air  
28 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
29 could have impacts on the public and environment. However, implementation of the BMPs and other  
30 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
31 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
32 when performing work with high-profile equipment within 2 miles of an airport, which would  
33 include implementation of recommendations to provide supplemental notice and/or equip high-  
34 profile structures with marking and lighting, would ensure that operation and maintenance of the  
35 water conveyance facilities would not create a substantial hazard to the public, environment or air  
36 traffic safety. The annual volume of solids under this alternative is anticipated to be 486,000 cubic  
37 feet (dry solids basis). Sediment and dewatered solids may contain hazardous constituents such as  
38 persistent pesticides and mercury that could pose a hazard to the environment if improperly  
39 disposed of, which would be considered a significant impact. Implementation of Mitigation Measure  
40 HAZ-6 would require the sampling and characterization of dewatered solids prior to reuse or  
41 disposal in order to evaluate disposal/reuse options to avoid contamination of soil, groundwater or  
42 surface water, and reduce this impact to a less-than-significant level.

1           **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 2           **and/or Disposal**

3           Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
 4           1A.

5           **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 6           **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 7           **CM13, CM14, CM16, CM18 and CM19**

8           **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 9           the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 10          workers, the public, and the environment would be similar to the potential effects described under  
 11          Alternative 1A. Potential variation from Alternative 1A would be anticipated to be minor but could  
 12          result from the selection of different areas for restoration activities based on the location of the  
 13          physical water conveyance features associated with each alternative.

14          Hazardous materials associated with the operation of construction equipment could be released into  
 15          the environment in the course of the materials' routine transport, use, or disposal. Releases could  
 16          also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
 17          known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
 18          creating the potential for hazardous materials disturbance and release. Other activities, including  
 19          the intentional demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material  
 20          and/or RTM would also present the potential to generate hazards or release hazardous materials.  
 21          However, prior to the reuse of spoils, dredged material or RTM, these materials would undergo  
 22          chemical characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and*  
 23          *CMs*, to ensure that they are not creating a hazard to the public and environment.

24          Further, other potential hazards that could result from implementing conservation measures  
 25          include the possible release of hazardous substances in proximity to sensitive receptors; the  
 26          accidental release of hazardous substances during operation and maintenance (e.g., herbicides for  
 27          nonnative vegetation control); the release, in the short-term, of pesticides from former agricultural  
 28          lands as a result of wetland and floodplain restoration; the potential for safety hazards related to  
 29          construction in the vicinity of an airport; damage or disruption of existing infrastructure such that  
 30          hazardous conditions were created; and the potential for wildfire hazards in the vicinity of  
 31          construction sites.

32          These potential effects, were they to occur, would be considered adverse. However, the proposed  
 33          conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
 34          extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
 35          suspected or has been verified. Further, as discussed for Impact HAZ-7 under Alternative 1A, with  
 36          implementation of Mitigation Measures HAZ-1a, HAZ-1b; UT-6a, UT-6c, TRANS-1a, and  
 37          environmental commitments (discussed previously for Impacts HAZ-1 through HAZ-6, and in detail  
 38          in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), the potential for substantial hazards  
 39          to the public or environment would be reduced and, accordingly, this effect would not be adverse.

40          Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
 41          result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

1 **CEQA Conclusion:** The potential for impacts related to the release of, and exposure of workers and  
 2 the public to, hazardous substances or conditions during construction, operation, and maintenance  
 3 of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 4 implementation would involve extensive use of heavy equipment during construction, and/or the  
 5 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 6 for nonnative vegetation control). Hazardous materials could be inadvertently released, exposing  
 7 construction workers or the public to hazards. Construction of restoration projects on or near  
 8 existing agricultural and industrial land and/or SOCs may result in a conflict or exposure to known  
 9 hazardous materials, and the use of high-profile equipment (i.e., 200 feet or higher) in close  
 10 proximity to airport runways could result in safety hazards to air traffic. These effects, were they to  
 11 occur, would be a significant impact. However, in addition to implementation of SWPPPs, HMMPs,  
 12 SPCCPs, SAPs and fire safety and prevention BMPs as part of a FPCP, Mitigation Measures HAZ-1a,  
 13 HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would ensure that there  
 14 would be no substantial hazards to the public or the environment due to implementation of the  
 15 conservation measures. As such, this impact would be less than significant.

16 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 17 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 18 **Construction Footprint, and Remediate and/or Contain Contamination**

19 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 20 1A.

21 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 22 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 23 **Dispose of Them in Accordance with Applicable Regulations**

24 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 25 1A.

26 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

27 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 28 Chapter 20, *Public Services and Utilities*.

29 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 30 **Minimizes Any Effect on Worker and Public Health and Safety**

31 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 32 Chapter 20, *Public Services and Utilities*.

33 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 34 **Plan**

35 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 36 1A in Chapter 19, *Transportation*.

1 **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 2 **Conservation Measures that Create or Improve Wildlife Habitat**

3 **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 4 wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 5 strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 6 from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 7 areas for restoration activities based on the location of the physical water conveyance features  
 8 associated with each alternative. Such variation may result greater or less opportunity for bird-  
 9 aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 10 because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 11 zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 12 Airport; Sacramento International Airport, and Byron Airport.

13 The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 14 because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 15 would reduce the severity of this effect through the development and implementation of measures  
 16 to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 17 adverse.

18 **CEQA Conclusion:** Implementation of CM2–11, because they would create or improve wildlife  
 19 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 20 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 21 significant impacts on public safety. The following airports, because they are in relatively close  
 22 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 23 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 24 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 25 through the ultimate development and implementation of measures to reduce, minimize and/or  
 26 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 27 significant and unavoidable.

28 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 29 **Regulatory Agencies**

30 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 31 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 32 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 33 extent possible.

34 **24.3.3.4 Alternative 1C—Dual Conveyance with West Alignment and**  
 35 **Intakes W1–W5 (15,000 cfs; Operational Scenario A)**

36 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 37 **Release of Hazardous Materials or by Other Means during Construction of the Proposed**  
 38 **Water Conveyance Facilities**

39 **NEPA Effects:** For the duration of construction of the water conveyance facilities, potential hazards  
 40 associated with the routine use of hazardous materials; natural gas accumulation in tunnels; existing  
 41 contaminants in soil, groundwater, or sediment; hazardous constituents present in RTM;  
 42 infrastructure containing hazardous materials; and the routine transport of hazardous materials

1 would be similar to those described under Alternative 1A. Variation in the structures built for water  
2 conveyance under this alternative, however, could result in differences in the location, extent, and  
3 type of potential hazards occurring through the release of hazardous materials. Potential differences  
4 are described below.

5 As under Alternative 1A, this alternative would also build five temporary fuel stations and an on-site  
6 maintenance facility; however, their locations would differ from those built under Alternative 1A  
7 and are shown in Figure 24-7 and Figure M3-3 in the Mapbook Volume. Fuel stations would be  
8 established in currently rural areas along the conveyance alignment. The northernmost fuel station  
9 would be located approximately 0.5 mile northwest of downtown Courtland; one would be located  
10 between Intakes 3 and 4, less than 1 mile southwest of the town of Hood; the third and fourth fuel  
11 stations would be on Ryer Island, and at the southwest corner of Webb Tract, respectively; and fifth  
12 and southernmost fuel station would be on the southwest side of Clifton Court forebay.

13 Materials such as oils, lubricants, paints, and sealants would be stored on-site and used in  
14 construction equipment and activities; spills and releases of these materials could occur in  
15 temporary work areas identified for the construction of water conveyance facilities (Figure M3-3 in  
16 the Mapbook Volume). While the potential for release would be similar to that described under  
17 Alternative 1A, the geographic extent of possible hazards would be different. Other variations could  
18 arise from the relatively shorter length of conveyance pipeline that would be constructed under this  
19 alternative.

20 The shorter length and different location of tunnel construction under this alternative would have a  
21 potential for hazards associated with tunnels that would vary in extent and location from those  
22 described under Alternative 1A. Natural gas accumulation in tunnels would also potentially result  
23 from construction of Alternative 1C; however, as discussed for Impact HAZ-1 under Alternative 1A,  
24 because gas wells are typically at a depth of 3,000 feet or greater, it is unlikely that a natural gas  
25 field will be encountered during tunnel construction because the tunnel would only be  
26 approximately 150 to 160 feet underground.

27 While the nature of effects stemming from tunnel construction would be similar to those described  
28 for Alternative 1A, the extent and location of these effects would vary. Approximately 13 million  
29 cubic yards of RTM are expected to be generated during construction of the Alternative 1C water  
30 conveyance facilities, compared with about 25 million cubic yards for Alternative 1A. As described  
31 above under Impact HAZ-1 for Alternative 1A, if the tunnels receive a “gassy or extra hazardous”  
32 classification, specialized MSHA-approved tunneling equipment would be required to prevent  
33 explosions during tunneling, as would compliance with other Cal-OSHA requirements in accordance  
34 with The Tunnel Safety Orders set forth in the California Code of Regulations (Title 8, Division 1,  
35 Chapter 4, Subchapter 20, Article 8, “Tunnel Classifications” [see Section 24.2.2.13, *California*  
36 *Occupational Safety and Health Act*) to provide safe work conditions during tunneling. Adherence to  
37 these regulations would reduce hazards posed by accumulation of natural gas in tunnels. Further,  
38 the construction contractor would be required to prepare an emergency plan prior to construction  
39 of the tunnels (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9, “Emergency Plan and  
40 Precautions”). This plan would outline the duties and responsibilities of all employees in the event  
41 of a fire, explosion or other emergency. The plan would include maps, evacuation plans, rescue  
42 procedures, communication protocol, and check-in/check-out procedures. Copies of the plan will be  
43 given to the local fire or designated off-site rescue teams and the Division.

1 Potential hazards related to RTM constituents would also result from construction of this  
2 alternative. Only non-toxic, biodegradable soil conditioners would be used during tunneling to  
3 ensure that the RTM and associated decant liquid do not pose a hazard to terrestrial and aquatic  
4 organisms. Additionally, RTM would undergo chemical characterization prior to reuse. RTM and  
5 decant liquid would also undergo chemical characterization prior to discharge to meet NPDES and  
6 RWQCB requirements. Should constituents in RTM or decant liquid exceed discharge limits, these  
7 tunneling byproducts would be treated to comply with discharge permit requirements.

8 As under Alternative 1A, construction of the water conveyance facilities for Alternative 1C would  
9 potentially conflict with existing contaminants in soil, sediment and/or groundwater. Oil and gas  
10 processing facilities that exist near the construction footprint are shown in Figure 24-1. To the  
11 extent that excavation, dewatering, and other activities are associated with the construction of  
12 canals and culvert siphons, the extent of these potential hazards would be substantially greater  
13 under this alternative than with Alternative 1A, which would have only one relatively short canal  
14 segment and no culvert siphons). To the extent feasible, design of this alternative would minimize  
15 the need to acquire or traverse areas where the presence of hazardous materials is suspected or has  
16 been verified.

17 Infrastructure and structures in the study area containing hazardous materials cross the Alternative  
18 1C conveyance alignment and construction footprint (Figures 24-3, 24-5, and 24-6). Table 24-3  
19 provides the number and types of regional electrical transmission and pipelines crossing this water  
20 conveyance facilities alignment. There are 12 overhead power/electrical transmission lines (2 with  
21 multiple crossings [Figure 24-6]), 7 natural gas pipelines (Figure 24-3), 3 petroleum product lines,  
22 and 47 inactive and 9 active oil or natural gas wells (Figure 24-5) within the proposed Alternative  
23 1C water conveyance facilities construction footprint. The precise location of pipelines within a  
24 tunnel section would be identified prior to construction to avoid conflicts with shaft construction  
25 and disposal of RTM. Studies will be done prior to construction to identify the minimum allowable  
26 distance between existing gas wells and tunnel excavation. Abandoned wells would be tested to  
27 confirm that they have been abandoned according to DOGGR well abandonment requirements.  
28 Those wells not abandoned according to these requirements will be improved. In addition, to avoid  
29 the potential conflicts with shaft construction and disposal areas, the utility and infrastructure  
30 relocation will be coordinated with local agencies and owners.

31 Additionally, approximately 726 permanent structures would be removed or relocated within the  
32 water conveyance facility footprint under this alternative. This includes approximately 194  
33 residential buildings. Other structures affected would consist primarily of storage or agricultural  
34 support facilities; however, several industrial and recreational structures would also be affected. As  
35 described under Alternative 1A, these structures may contain hazardous materials that would  
36 require proper handling and disposal, if demolition is necessary. Disturbance of this infrastructure  
37 during construction of the water conveyance facilities could result in hazards similar to those  
38 described under Alternative 1A. As described for Impact HAZ-1 under Alternative 1A, Mitigation  
39 Measure HAZ-1b would be implemented by DWR to ensure that there are no adverse effects related  
40 to structure demolition due to hazardous materials. As described previously, Mitigation Measure  
41 HAZ-1b would require that DWR coordinate with existing property owners to identify existing  
42 potentially hazardous infrastructure and infrastructure containing potentially hazardous materials,  
43 and that DWR perform pre-demolition surveys in order to identify and characterize hazardous  
44 materials to ensure the safe and appropriate handling and disposal of these materials. Risks  
45 associated with the transportation of hazardous materials via trucks, trains, and ships would be  
46 similar to those described under Alternative 1A but would occur in different areas. Three designated

1 hazardous materials transportation routes, Byron Highway, and State Highways 4 and 12, cross the  
2 construction footprint of this alternative (Figure 24-2 and in Table 24-4). Routes anticipated to be  
3 affected during construction of the water conveyance facilities are listed in Chapter 19,  
4 *Transportation*. Under Mitigation Measure TRANS-1a, a site-specific construction traffic  
5 management plan, taking into account hazardous materials transportation, would be prepared and  
6 implemented prior to initiation of water conveyance facilities construction. As discussed under  
7 Impact HAZ-1 for Alternative 1A, BMPs implemented as part of this plan would reduce the potential  
8 for effects on hazardous materials transportation routes in the study area. The Alternative 1C water  
9 conveyance facilities alignment would cross four railroad ROWs, 2 active and 1 abandoned UPRR  
10 lines, and a BNSF line (Table 24-4). A culvert siphon is proposed to carry the canal under the BNSF  
11 line between Sunset Road and Orwood Road. Because this crossing is in a construction work area,  
12 train operations along the BNSF Railway/Amtrak San Joaquin Line could be affected. Construction of  
13 this alternative would cross other rail lines, including an out-of-service UPRR line. If the abandoned  
14 UPRR were reopened prior to construction, the continuity of rail traffic, and thus the potential for  
15 hazards associated w/upset of hazardous materials transportation on this line, could be managed  
16 through implementation of Mitigation Measure TRANS-1a. Mitigation Measure TRANS-1a would  
17 include stipulations to coordinate with rail providers to develop alternative interim transportation  
18 modes (e.g., trucks or buses) that could be used to provide freight and/or passenger service during  
19 any longer term railroad closures and daily construction time windows during which construction  
20 would be restricted or rail operations would need to be suspended for any activity within railroad  
21 rights of way. This would minimize the potential risk of release of hazardous materials being  
22 transported via subject rails. Construction of Alternative 1C would not substantially increase the  
23 volume of barge movement within the study area such that existing marine traffic would be  
24 disrupted and potentially increase the risk for hazards related to such disruption. However, barges  
25 supporting water conveyance facilities construction may also transport hazardous materials such as  
26 fuels and lubricants or other chemicals. The potential exists for accidental release of hazardous  
27 materials from project-related barges. To avoid effects on the environment related to this issue,  
28 BMPs implemented as part of a Barge Operations Plan (for detail see Appendix 3B, *Environmental*  
29 *Commitments, AMMs, and CMs*), as discussed under Impact HAZ-1 for Alternative 1A would avoid  
30 and/or minimize this potential adverse effect.

31 In summary, during construction of the water conveyance facilities, the potential would exist for  
32 direct effects on construction personnel, the public and/or the environment associated with a  
33 variety of potentially hazardous conditions because of the intensity of construction activities at the  
34 north Delta intakes, Byron Tract forebay, conveyance features (e.g., siphons, canals, tunnels), and the  
35 hazardous materials that would be used in these areas. Many of these activities would occur in close  
36 proximity to the town of Hood, and would involve multiple years of use of hazardous construction  
37 materials. Additionally, large-scale construction activities involving the use of hazardous materials  
38 would be located in and near water bodies. Potential hazards include the routine transport, use or  
39 disposal of hazardous materials; natural gas accumulation in water conveyance tunnels; the  
40 inadvertent release of existing contaminants in soil and groundwater, or hazardous materials in  
41 existing infrastructure to be removed; disturbance of electrical transmission lines; and hazardous  
42 constituents present in RTM. Additionally, there is the potential for the construction of the water  
43 conveyance facilities to indirectly result in the release of hazardous materials through the disruption  
44 of existing road, rail, or river hazardous materials transport routes because construction would  
45 occur in the vicinity of three hazardous material transport routes, three railroad corridors, and  
46 waterways with barge traffic and would require construction traffic that could disrupt these routes.  
47 These potential effects are considered adverse because they would potentially result in direct

1 exposure of the public (including construction personnel), and surface water and groundwater to  
2 physical and/or chemical hazards as discussed.

3 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design will minimize, to  
4 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
5 is suspected or has been verified. Additionally, environmental commitments would be implemented,  
6 including, SWPPPs, SPCCPs, HMMPs, and SAPs; chemical characterization of RTM prior to reuse (e.g.,  
7 RTM in levee reinforcement) or discharge; and a Barge Operation Plan, which together would  
8 reduce these potential hazards associated with construction of the water conveyance facilities.  
9 Finally, the implementation of Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c  
10 (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19,  
11 *Transportation*) would further reduce the potential severity of this impact. As such, construction of  
12 the water conveyance facilities would not create a substantial hazard to the public or the  
13 environment through the routine transport, use, or disposal of hazardous materials or the  
14 upset/accidental release of these materials. Therefore, this effect would not be adverse.

15 **CEQA Conclusion:** During construction of the water conveyance facilities under Alternative 1C, the  
16 potential would exist for direct significant impacts on construction personnel, the public and/or the  
17 environment associated with a variety of hazardous physical or chemical conditions. Such  
18 conditions may arise as a result of the intensity and duration of construction activities at the north  
19 Delta intakes, Byron Tract Forebay, conveyance pipelines and tunnels, and because of the hazardous  
20 materials that would be used in these areas during construction. Potential hazards include the  
21 routine use of hazardous materials (as defined by Title 22 of the California Code of Regulations,  
22 Division 4.5); natural gas accumulation in water conveyance tunnels; the inadvertent release of  
23 existing contaminants in soil and groundwater, or hazardous materials in existing infrastructure to  
24 be removed; disturbance of electrical transmission lines; and hazardous constituents present in  
25 RTM. Many of these physical and chemical hazards would occur in close proximity to the town of  
26 Hood during construction of the north Delta intakes. Additionally, the potential would exist for the  
27 construction of the water conveyance facilities to indirectly result in the release of hazardous  
28 materials through the disruption of existing road, rail, or river hazardous materials transport routes  
29 because construction would occur in the vicinity of three designated hazardous material transport  
30 routes, three active railroad corridors, and waterways with barge traffic and would require  
31 construction traffic that could disrupt these routes. For these reasons, this is considered a significant  
32 impact. However, with the implementation of the previously described environmental commitments  
33 and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public  
34 Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the  
35 water conveyance facilities would not create a substantial hazard to the public or the environment  
36 through the routine transport, use, or disposal of hazardous materials or the upset/accidental  
37 release of these materials. The severity of this impact would be reduced with the implementation of  
38 these environmental commitments and mitigation measures by identifying and describing potential  
39 sources of hazardous materials so that releases can be avoided and materials can be properly  
40 handled; detailing practices to monitor pollutants and control erosion so that appropriate measures  
41 are taken; implementing onsite features to minimize the potential for hazardous materials to be  
42 released to the environment or surface waters; minimizing risk associated with the relocation of  
43 utility infrastructure; and coordinating the transport of hazardous materials to reduce the risk of  
44 spills. As such, this impact would be less than significant.

1       **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2       **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3       **Construction Footprint, and Remediate and/or Contain Contamination**

4       Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5       1A.

6       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8       **Dispose of Them in Accordance with Applicable Regulations**

9       Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10       1A.

11       **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12       Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13       Chapter 20, *Public Services and Utilities*.

14       **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15       **Minimizes Any Effect on Worker and Public Health and Safety**

16       Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17       Chapter 20, *Public Services and Utilities*.

18       **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19       **Plan**

20       Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21       1A in Chapter 19, *Transportation*.

22       **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 23       **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 24       **Facilities**

25       **NEPA Effects:** There are no hospitals located within 0.25 mile of Alternative 1C. However, as shown  
 26       in Figure 24-8, Lakewood Drive, Sycamore Drive, and Summer Lake Community Parks in Oakley, and  
 27       Mokelumne High (Continuation) School in Courtland would be within 0.25 mile of the construction  
 28       footprint for Alternative 1C. Sycamore Drive Park would be near a tunnel work area southwest of  
 29       Summer Lake. The tunnel work area is required to support construction operations. Temporary  
 30       offices, parking, tunnel segment storage, fan line storage, a maintenance shop, potable water  
 31       treatment, and potentially other requirements. Because equipment would be maintained during  
 32       construction in this area, which would potentially require the use of hazardous materials (e.g., fuels,  
 33       grease, oil and solvents), and because heavy equipment would be operated in this area, there would  
 34       be the potential for inadvertent leaks or spills of hazardous materials. Lakewood Drive and Summer  
 35       Lake Community Parks are located within 0.25 mile of the construction footprint of a proposed  
 36       temporary 12-kV transmission line west of Summer Lake, and Mokelumne High (Continuation)  
 37       School would be near a proposed temporary 69-kV transmission line construction footprint.  
 38       Construction of these temporary transmission lines would require the use of heavy equipment, such  
 39       as dozers, cranes, and off-road work trucks, which would require the routine use of hazardous

1 materials (e.g., fuels, solvents, oil and grease). Consequently, there would be the risk of accidental  
2 spills or equipment leaks of these types of hazardous materials, as discussed under Impact HAZ-1  
3 under Alternative 1A. The most significant hazard risk from any power line is the danger of  
4 electrical contact between an object on the ground and an energized conductor. The closest park is  
5 approximately 0.2 mile from the construction footprint for the transmission line, and Mokelumne  
6 High (Continuation) School is across the Sacramento River from the proposed transmission line  
7 construction area, therefore there would be no risk to these sensitive receptors with regard to  
8 transmission line construction.

9 Although there would be a risk of accidental spills of hazardous materials (e.g., fuels, solvents,  
10 paints) during the construction of the proposed temporary transmission lines, and generally where  
11 heavy construction equipment is operated, the quantities of hazardous materials likely to be used  
12 during construction activities are likely to be small. Were hazardous materials to be released  
13 inadvertently, spills or equipment leaks would be localized and minimal, and thus there would be no  
14 risk to anyone not in immediate proximity to these releases spills. Further, as discussed under  
15 Impact HAZ-1 for Alternative 1A, BMPs to minimize the potential for the accidental release of  
16 hazardous materials and to contain and remediate hazardous spills, as part of the SWPPPs, SPCCPs,  
17 and HMMPs, would be implemented, as described in Section 24.3.3.2, *Alternative 1A—Dual*  
18 *Conveyance with Pipeline/Tunnel and Intakes 1–5 (15,000 cfs; Operational Scenario A)*, under  
19 “Routine Use of Hazardous Materials” for Alternative 1A, and as set forth in Appendix 3B,  
20 *Environmental Commitments, AMMs, and CMs*. Therefore, these sensitive receptors would not be  
21 exposed to hazardous materials, substances, or waste during construction of the water conveyance  
22 facilities. As such, there would be no adverse effect. Potential air quality effects on sensitive  
23 receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

24 **CEQA Conclusion:** Lakewood Drive, Sycamore Drive, and Summer Lake Community Parks in Oakley,  
25 and Mokelumne High (Continuation) School in Courtland, are within 0.25 mile of the construction  
26 footprint of Alternative 1C. Lakewood Drive and Summer Lake Community Parks and Mokelumne  
27 High (Continuation) School are near the construction footprint of proposed temporary 12-kV  
28 transmission lines. Construction of these lines would require the routine use of hazardous materials  
29 (e.g., fuels, solvents, oil and grease) because heavy machinery such as cranes, off-road work trucks,  
30 and dozers would be required. Consequently, there would be the risk of accidental spills and  
31 equipment leaks of these types of hazardous materials, as discussed under Impact HAZ-1 under  
32 Alternative 1A during construction. Sycamore Drive Park would be near a tunnel work area  
33 southwest of Summer Lake, as well as the proposed 12-kV transmission line. The tunnel work area  
34 is required to support construction operations. Temporary offices, parking, tunnel segment storage,  
35 fan line storage, a maintenance shop, potable water treatment, and potentially other requirements.  
36 Because equipment would be maintained in this area during construction, which would potentially  
37 require the use of hazardous materials (e.g., fuels, grease, oil and solvents), and because heavy  
38 equipment would be operated in this area, there would be the potential for inadvertent leaks or  
39 spills of hazardous materials. However, the potential to expose people at the parks or school to  
40 hazardous materials, substances or waste during construction of the water conveyance facilities due  
41 to these potential inadvertent releases would be negligible because spills and leaks would likely be  
42 small and localized. Further, BMPs to minimize the potential for the accidental release of hazardous  
43 materials and to contain and remediate hazardous spills, as part of the SWPPPs, SPCCPs, and  
44 HMMPs, would be implemented, as described in Section 24.3.3.2, *Alternative 1A—Dual Conveyance*  
45 *with Pipeline/Tunnel and Intakes 1–5 (15,000 cfs; Operational Scenario A)*, under “Routine Use of  
46 Hazardous Materials” for Alternative 1A, and as set forth in Appendix 3B, *Environmental*

1 *Commitments, AMMs, and CMs.* Therefore, these sensitive receptors would not be exposed to  
 2 hazardous materials, substances, or waste during construction of the water conveyance facilities,  
 3 and as such, this impact would be less than significant. No mitigation is required. Potential air  
 4 quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases.*

5 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 6 **Create a Significant Hazard to the Public or the Environment**

7 **NEPA Effects:** There are no “Cortese List” sites within the construction footprint of the Alternative  
 8 1C water conveyance facilities. For those hazardous materials sites identified within the 0.5-mile  
 9 radius (Table 24-5 and Figure 24-4), but which are not within the construction footprint, there  
 10 would be no potential for the construction of the water conveyance facilities to disturb those sites  
 11 such that there would be a re-release of hazardous materials that would create a hazard for the  
 12 public or environment. However, as indicated in Table 24-5, Mill Site A, the site of a former large  
 13 agricultural mill, would be located in a potential borrow and/or spoils area within the construction  
 14 footprint of this alternative (Figure 24-4). This site was identified as a SOC in the 2009 ISA.  
 15 However, there is no regulatory listing for this site, and no known hazardous materials occur at this  
 16 site within the Alternative 1C construction footprint (Figure 24-4). Consequently, the potential for to  
 17 conflict with hazards associated with this site is assumed to be minimal, and there would be no  
 18 hazard to the public or environment as a result of hazardous materials release from this site during  
 19 construction of the water conveyance facilities. Therefore, this effect would not be adverse. The  
 20 potential for encountering unknown hazardous materials sites during the course of construction is  
 21 discussed under Impact HAZ-1.

22 **CEQA Conclusion:** Mill Site A, the site of a former large agricultural mill, would be located in a  
 23 potential borrow and/or spoils area within the construction footprint of this alternative. There is no  
 24 regulatory listing for this site, and no known hazardous materials occur at this site within the  
 25 Alternative 1C construction footprint. Therefore, the potential risk to release hazardous materials  
 26 from this site during construction of the water conveyance facilities is negligible, and there would be  
 27 no related significant hazard to the public or the environment. Therefore, this impact would be less  
 28 than significant. No mitigation is required.

29 The potential for encountering unknown hazardous materials sites during the course of  
 30 construction is discussed under Impact HAZ-1.

31 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 32 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 33 **Study Area during Construction of the Water Conveyance Facilities**

34 **NEPA Effects:** Development around an airport, particularly in the approach and departure paths, can  
 35 create obstructions in the airspace traversed by an approaching or departing aircraft. Additionally,  
 36 certain land uses have the potential to create hazards to aircraft such as a distracting glare, smoke,  
 37 steam, or invisible heat plumes. Safety impacts from aircraft accidents near airports are typically  
 38 avoided by specifying the types of land uses allowed, and thereby limiting the number of people who  
 39 would be exposed to the risk of an accident, and avoiding land uses that could create hazards to air  
 40 traffic. Airspace protection primarily involves limitations on the height of objects on the ground near  
 41 airports.

42 The nature of safety hazards related to air traffic would be similar to those described under  
 43 Alternative 1A. However, under Alternative 1C, the water conveyance facilities would be within 2

1 miles of Delta Air Park, Funny Farm Airport, and Borges-Clarksburg Airport (all private air  
2 facilities), and Byron Airport, a public air facility (Figure 24-9). Delta Air Park, in Knightsen, is within  
3 2 miles of a proposed RTM area; a proposed tunnel and tunnel work area; the main construction  
4 shaft for the tunnel; the proposed canal; a potential borrow and/or spoils area; and two proposed  
5 temporary transmission lines (12 kV and 69 kV). Similarly, Funny Farm Airport, in Brentwood, is  
6 within 2 miles of several proposed water conveyance features and work areas—a borrow and/or  
7 spoils area; a proposed bridge and bridge work area; a railroad work area; a siphon work area; a  
8 proposed canal; a proposed siphon; and a proposed temporary 12-kV transmission line. The Borges-  
9 Clarksburg Airport is less than 1 mile from the proposed Intake 1, and proposed permanent 69-kV  
10 and temporary 12-kV transmission lines. Finally, Bryon Airport is within 2 miles of the construction  
11 footprints or areas of the following proposed water conveyance facilities features: fuel station;  
12 concrete batch plant; borrow and/or spoils area; bridge and bridge work area; siphon and siphon  
13 work area; Byron Tract Forebay; railroad work area; control structure and control structure work  
14 area; and a 12-kV temporary transmission line.

15 With the exception of the proposed transmission lines, bridge and bridge work area, intake and  
16 intake work area, construction of these features or work in these areas would not require the use of  
17 high-profile construction equipment. Because construction of the proposed transmission lines  
18 would potentially require high-profile equipment (e.g., cranes), the safety of air traffic arriving or  
19 departing from these airports could be compromised during construction of these features or work  
20 in these areas if it involves the movement of high-profile construction equipment.

21 Depending on the location and height of any high-profile construction equipment or structures  
22 relative to the Byron Airport, because it is a public air facility the BDCP may be subject to an OE/AAA  
23 to be performed by the FAA, as discussed under Impact HAZ-4 for Alternative 1A. Compliance with  
24 the results of the OE/AAA (14 CFR Part 77), would reduce the risk of adverse effects on air traffic  
25 safety due to water conveyance facility construction activities in the vicinity of this airport. The  
26 Caltrans' Division of Aeronautics would be informed in writing, as discussed under Impact HAZ-4 for  
27 Alternative 1A, and DWR would comply with Caltrans' recommendations regarding BMPs to avoid  
28 any adverse effects on air safety. Consequently, there would be no adverse effect on air safety during  
29 construction of the water conveyance facilities.

30 **CEQA Conclusion:** The Delta Air Park, Funny Farm Airport, and Borges-Clarksburg Airport, all  
31 private airstrips, and Byron Airport, a public air facility, would be within 2 miles of the construction  
32 footprint of several proposed water conveyance facilities features, as well as associated work areas  
33 for Alternative 1C. The use of helicopters for stringing the proposed 230-kV transmission lines and  
34 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
35 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
36 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
37 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
38 is operated too close to runways. DWR would coordinate with Caltrans' Division of Aeronautics  
39 prior to initiating construction and comply with its recommendations based their review, as well  
40 comply with the recommendations of the OE/AAA (for Byron Airport). These recommendations,  
41 which could include limitations necessary to minimize potential problems, such as the use of  
42 temporary construction equipment, supplemental notice requirements, and marking and lighting  
43 high-profile structures, would reduce the potential for impacts on air safety. Accordingly, this impact  
44 would be less than significant. No mitigation is required.

1 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 2 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 3 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 4 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

5 **NEPA Effects:** Potential hazards related to wildland fire would be similar to those described under  
 6 Impact HAZ-5 for Alternative 1A, but would carry the potential to affect different areas. As shown in  
 7 Figure 24-10, no portion of Alternative 1C is located in or near an area designated as a High or Very  
 8 High Fire Hazard Severity Zone. The northernmost and southernmost portions of Alternative 1C,  
 9 where fuel stations and the Byron Tract Forebay, would be respectively located, are near Moderate  
 10 Fire Hazard Severity Zones (Figure 24-10).

11 As described under Impact HAZ-5 for Alternative 1A and in Appendix 3B, *Environmental*  
 12 *Commitments, AMMs, and CMs*, fire prevention and control measures would be implemented, as part  
 13 of a FPCP, during construction, and operation and maintenance of the water conveyance facilities in  
 14 full compliance with Cal-OSHA standards for fire safety and prevention. Because development and  
 15 implementation of measures under the FPCP would help ensure that people or structures would not  
 16 be subject to a substantial risk of loss, injury or death involving wildland fires and because the  
 17 proposed water conveyance facilities would not be located in a High or Very High Fire Hazard  
 18 Severity Zone, this effect would not be adverse.

19 **CEQA Conclusion:** Construction of Alternative 1C would involve the use of ignitable materials,  
 20 including fuels and solvents, which would be used for the operation and maintenance of  
 21 construction vehicles and other equipment. People or structures would not be subject to a  
 22 substantial risk of loss, injury or death involving wildland fires during construction or operation and  
 23 maintenance of the water conveyance facilities because the BDCP would comply with Cal-OSHA fire  
 24 prevention and safety standards; DWR would implement standard fire prevention, safety and  
 25 control measures, as part of a FPCP; and because the water conveyance facilities would not be  
 26 located in a High or Very High Fire Hazard Severity Zone. Therefore, this impact would be less than  
 27 significant. No mitigation is required.

28 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 29 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 30 **Water Conveyance Facilities**

31 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 32 conveyance facilities would be similar to those described for Alternative 1A, particularly with  
 33 respect to intakes and intake pumping plants. This alternative may require the transport, storage,  
 34 and use of chemicals or hazardous waste materials, including fuel, oils, grease, solvents, and paints.  
 35 Solids collected at solids lagoons and sediment dredged during intake maintenance may contain  
 36 hazardous constituents (e.g., persistent pesticides, mercury, PCBs). The annual volume of solids is  
 37 anticipated to be approximately 486,000 cubic feet (dry solids) under Alternative 1C. Differences in  
 38 potential hazards relative to Alternative 1A could generally result from variations in operational and  
 39 maintenance activities with respect to canals, culvert siphons, and control structures along this  
 40 alignment. However, this alternative would also avoid potential hazards associated with operation  
 41 and maintenance of longer tunnel segments and those relating to the intermediate forebay.

42 As previously discussed under Impact HAZ-2, Lakewood Drive Park, Sycamore Drive Park, Summer  
 43 Lake Park, and Mokelumne High (Continuation) School would be within 0.25 mile of the  
 44 construction footprint for Alternative 1C. Should hazardous materials be inadvertently released in

1 substantial quantities during routine operations and maintenance at the constructed facilities due to  
2 improper handling, there would be a potential risk to the public (including sensitive receptors).  
3 However, because the types of potentially hazardous materials used during routine operation and  
4 maintenance activities would be used in relatively small quantities, and because BMPs, as would be  
5 implemented in the SWPPPs, SPCCPs, and HMMPs (as detailed in Appendix 3B, *Environmental*  
6 *Commitments, AMMs, and CMs*), would be in place to help prevent the inadvertent release of these  
7 materials and to contain and remediate spills should they occur, the risk to sensitive receptors  
8 within 0.25 mile of the construction footprint would be negligible.

9 To ensure that potentially contaminated sediment from maintenance dredging activities at the  
10 intakes would not adversely affect soil, groundwater or surface water, a SAP would be implemented  
11 prior to any dredging activities, as described under Impact HAZ-1 for this alternative. All sediment  
12 would be characterized chemically prior to reuse to ensure that reuse of this material would not  
13 result in a hazard to the public or the environment. Additionally, improper disposal of 486,000 cubic  
14 feet of potentially contaminated (e.g., persistent pesticides and mercury) lagoon solids could result  
15 in contamination of soil, groundwater and surface water, which would be considered an adverse  
16 effect. With implementation of Mitigation Measure HAZ-6, lagoon solids would be sampled and  
17 characterized to evaluate disposal options, and disposed of accordingly at an appropriate, licensed  
18 facility ensuring that there would be no adverse effect on the public or the environment.

19 The locations of public airports and private airstrips with respect to the west alignment are  
20 provided in Figure 24-9. Delta Air Park, Byron Airport, and the Borges-Clarksburg Airport would be  
21 within 2 miles of the Alternative 1C construction footprint. With the exception of power  
22 transmission lines supplying power to pumps, surge towers, and other equipment used for  
23 operation and maintenance of the BDCP, water conveyance facilities operations and maintenance  
24 are not anticipated to require high-profile equipment (i.e., equipment with a vertical reach of 200  
25 feet or more), the use of which near an airport runway could result in an adverse effect on aircraft.  
26 DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and would coordinate with  
27 Caltrans' Division of Aeronautics prior to any maintenance activities requiring high-profile  
28 maintenance equipment and comply with any air safety recommendations Caltrans may have to  
29 ensure that there is no conflict with or adverse effect on air traffic. Compliance with these  
30 recommendations, which could include limitations necessary to minimize potential problems, such  
31 as the use of temporary construction equipment, supplemental notice requirements, and marking  
32 and lighting high-profile structures would reduce the potential for impacts on air safety.

33 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
34 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
35 substantial hazard to the public or the environment and this impact would not be adverse.

36 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
37 operation and maintenance of the water conveyance facilities and the potential interference with air  
38 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
39 could have impacts on the public and environment. However, implementation of the BMPs and other  
40 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
41 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
42 when performing work with high-profile equipment within 2 miles of an airport, which would  
43 include implementation of recommendations to provide supplemental notice and/or equip high-  
44 profile structures with marking and lighting, would ensure that operation and maintenance of the  
45 water conveyance facilities would not create a substantial hazard to the public, environment or air

1 traffic safety. Improper disposal of 486,000 cubic feet of potentially contaminated lagoon solids  
 2 could result in contamination of soil, groundwater and surface water, which would be considered a  
 3 significant impact. With implementation of Mitigation Measure HAZ-6, solids from the solids  
 4 lagoons, which could contain hazardous constituents such as persistent pesticides and mercury,  
 5 would be sampled and characterized to evaluate disposal options, and would be disposed of  
 6 accordingly at an appropriate, licensed facility ensuring that there would be no significant impact.

7 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
 8 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
 9 substantial hazard to the public or the environment and, accordingly, this impact would be less than  
 10 significant.

11 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 12 **and/or Disposal**

13 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
 14 1A.

15 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 16 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 17 **CM13, CM14, CM16, CM18 and CM19**

18 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 19 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 20 workers, the public, and the environment would be similar to those described under Alternative 1A.  
 21 Potential variation from Alternative 1A would be anticipated to be minor but could result from the  
 22 selection of different areas for restoration activities based on the location of the physical water  
 23 conveyance features associated with each alternative.

24 Hazardous materials associated with the operation of construction equipment (e.g., fuels, lubricants)  
 25 could be inadvertently released into the environment in the course of the materials' routine  
 26 transport, use, or disposal. Similarly, construction activities could encounter known or unknown  
 27 hazardous materials sites located on or in the vicinity of construction sites, creating the potential for  
 28 hazardous materials disturbance and release. Other activities, including the intentional demolition  
 29 of existing structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM, would also  
 30 present the potential to generate hazards or release hazardous materials. However, prior to the  
 31 reuse of spoils, dredged material or RTM, these materials would undergo chemical characterization,  
 32 as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, to ensure that they are  
 33 not creating a hazard to the public and environment.

34 Further, other potential hazards that could result from implementing conservation measures  
 35 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
 36 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
 37 release of hazardous substances during operation and maintenance and/or transport (e.g.,  
 38 herbicides for nonnative vegetation control); the release, in the short-term, of pesticides from  
 39 former agricultural lands as a result of wetland and floodplain restoration; the potential for safety  
 40 hazards related to construction in the vicinity of an airport; and the potential for wildfire hazards in  
 41 the vicinity of construction sites.

1 These potential effects, were they to occur, would be considered adverse. However, the proposed  
 2 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
 3 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
 4 suspected or has been verified. In addition, as discussed under Impact HAZ-7 for Alternative 1A,  
 5 with implementation of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, TRANS-1a, and  
 6 environmental commitments (discussed previously for Impacts HAZ-1 through HAZ-6, and in detail  
 7 in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), the potential for substantial hazards  
 8 to the public or environment would be reduced and, accordingly, this effect would not be adverse.

9 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
 10 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

11 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
 12 public to hazardous substances or conditions during construction, operation, and maintenance of  
 13 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 14 implementation would involve extensive use of heavy equipment during construction, and/or the  
 15 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 16 for nonnative vegetation control). Hazardous materials could be inadvertently released, exposing  
 17 construction workers or the public to hazards. Construction of restoration projects on or near  
 18 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 19 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 20 in hazards to air traffic. These potential effects, were they to occur, would be considered a significant  
 21 impact. However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP,  
 22 Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of  
 23 which would ensure that these potential impacts would be less than significant.

24 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 25 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 26 **Construction Footprint, and Remediate and/or Contain Contamination**

27 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 28 1A.

29 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 30 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 31 **Dispose of Them in Accordance with Applicable Regulations**

32 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 33 1A.

34 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

35 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 36 Chapter 20, *Public Services and Utilities*.

37 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 38 **Minimizes Any Effect on Worker and Public Health and Safety**

39 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 40 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 2           **Plan**

3           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 4           1A in Chapter 19, *Transportation*.

5           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 6           **Conservation Measures that Create or Improve Wildlife Habitat**

7           **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 8           wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 9           strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 10          from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 11          areas for restoration activities based on the location of the physical water conveyance features  
 12          associated with each alternative. Such variation may result greater or less opportunity for bird-  
 13          aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 14          because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 15          zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 16          Airport; Sacramento International Airport, and Byron Airport.

17          The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 18          because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 19          would reduce the severity of this effect through the development and implementation of measures  
 20          to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 21          adverse.

22          **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 23          habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 24          flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 25          significant impacts on public safety. The following airports, because they are in relatively close  
 26          proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 27          Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 28          Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 29          through the ultimate development and implementation of measures to reduce, minimize and/or  
 30          avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 31          significant and unavoidable.

32           **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 33           **Regulatory Agencies**

34           Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 35           1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 36           a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 37           extent possible.

### 24.3.3.5 Alternative 2A—Dual Conveyance with Pipeline/Tunnel and Five Intakes (15,000 cfs; Operational Scenario B)

#### Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the Release of Hazardous Materials or by Other Means during Construction of the Water Conveyance Facilities

**NEPA Effects:** Hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction of the water conveyance facilities for Alternative 2A would be similar to those described under Alternative 1A. However, under Alternative 2A, Intakes 6 and 7 could be constructed instead of Intakes 4 and 5, as would an operable barrier at the head of Old River. Despite the potentially different locations for selected intakes and the construction of an operable barrier, it is anticipated that effects associated with the transport and use of fuels for this alternative would be similar to those described for Alternative 1A. Construction of an operable barrier at the head of Old River would create a marginally higher potential for hazards. Construction of this barrier would add an additional location where hazardous materials could potentially be released during storage, use, or transport. Additionally, land-based and in-water construction activities, including dredging, associated with this barrier could potentially encounter and release contaminated soil, groundwater, or sediment.

Further, similar to Alternative 1A, tunnel construction activities would carry the potential to encounter gases that could enter the tunnels and accumulate to flammable or explosive concentrations. The construction contractor would be required to prepare an emergency plan prior to construction of the tunnels (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9, “Emergency Plan and Precautions”). This plan would outline the duties and responsibilities of all employees in the event of a fire, explosion or other emergency. The plan would include maps, evacuation plans, rescue procedures, communication protocol, and check-in/check-out procedures. Copies of the plan will be given to the local fire or designated off-site rescue teams and the Division.

Hazardous constituents associated with RTM are not anticipated; however, the possibility exists for RTM and decanted water to pose a hazard to the construction workers, the public, or the environment. Additionally, stored bulk quantities of hazardous materials that have been released to soils and groundwater could be rereleased during construction, also posing a potential hazard. Water conveyance facilities construction would also require in-channel dredging (e.g., for construction of the operable barrier at the head of Old River), which would result in the resuspension of potentially contaminated sediments. Existing infrastructure, including oil and gas wells, also have the potential to release hazardous materials, as would the transport of hazardous materials during construction. Infrastructure and structures in the study area containing hazardous materials cross the Alternative 2A conveyance alignment and construction footprint (Figures 24-3, 24-5, and 24-6). Table 24-3 provides the number and types of regional electrical transmission and pipelines crossing this water conveyance facilities alignment. There are 11 overhead power/electrical transmission lines, 7 natural gas pipelines, 4 petroleum product lines, and inactive and active oil or natural gas wells (Figure 24-5) within the proposed Alternative 2A water conveyance facilities construction footprint. The precise location of pipelines within a tunnel section would be identified prior to construction to avoid conflicts with shaft construction and disposal of RTM. Studies will be done prior to construction to identify the minimum allowable distance between existing gas wells and tunnel excavation. Abandoned wells would be tested to confirm that they have been abandoned according to DOGGR well abandonment requirements. Those wells not abandoned according to these requirements will be improved. In addition, to avoid the potential conflicts with

1 shaft construction and disposal areas, the utility and infrastructure relocation will be coordinated  
2 with local agencies and owners.

3 If intakes 4 and 5 are selected for this alternative, approximately 204 permanent structures would  
4 be removed or relocated within the Alternative 2A water conveyance facility footprint. This includes  
5 approximately 59 residential buildings. Other structures affected would consist primarily of storage  
6 or agricultural support facilities (120), as well as 15 recreational facilities (e.g., pools and docks),  
7 and 10 other types of structures (e.g., power/utility structures, bridges, and other types of  
8 infrastructure). As described under Alternative 1A, these structures may contain hazardous  
9 materials that would require proper handling and disposal, if demolition is necessary. Under this  
10 alternative, selection of Intakes 6 and 7 instead of Intakes 4 and 5 would be anticipated to disrupt  
11 approximately 18 additional structures, including approximately 70 residential structures, 15  
12 recreational structures (e.g., pools and docks), as well as 124 storage/support buildings. As  
13 described for Impact HAZ-1 under Alternative 1A, Mitigation Measure HAZ-1b would be  
14 implemented by DWR to ensure that there are no adverse effects related to structure demolition due  
15 to hazardous materials.

16 As described for Alternative 1A under Impact HAZ-1, in general, the transportation of hazardous  
17 materials via trucks, trains and ships poses potential risks associated with the accidental release of  
18 these materials to the environment. Rerouting vehicular traffic carrying hazardous materials during  
19 construction of the water conveyance facilities could increase the risk of accidental release due to  
20 inferior road quality or lack of driver familiarity with the modified routes. Hazardous materials  
21 transportation routes are presented in Figure 24-2 and in Table 24-4. Routes anticipated to be  
22 affected during construction of the water conveyance facilities are described in Chapter 19,  
23 *Transportation*. It is not anticipated that traffic on any of these highways will need to be rerouted.  
24 Under Mitigation Measure TRANS-1a, a site-specific construction traffic management plan, taking  
25 into account hazardous materials transportation, would be prepared and implemented prior to  
26 initiation of construction of water conveyance facilities (as described under Impact HAZ-1 for  
27 Alternative 1A), and would be expected to reduce potential circulation effects and avoiding  
28 rerouting of traffic as practicable. The plan would reduce the potential for effects on hazardous  
29 materials transportation routes in the study area. Barges supporting water conveyance facilities  
30 construction may also transport hazardous materials such as fuels and lubricants or other  
31 chemicals. The potential exists for accidental release of hazardous materials from project-related  
32 barges. To avoid effects on the environment related to this issue, BMPs would be implemented as  
33 part of a Barge Operations Plan (as discussed under Impact HAZ-1 for Alternative 1A and in  
34 Appendix 3B, *Environmental Commitments, AMMs, and CMs*) that would reduce the potential for  
35 accidental releases of hazardous materials during transport and transfer. Finally, under this  
36 alternative, the water conveyance would cross under the existing BNSF/Amtrak San Joaquin line  
37 between Bacon Island and Woodward Island; however, the effect of this crossing would likely be  
38 minimal because the proposed conveyance would traverse the railroad in a deep bore tunnel (see  
39 Chapter 19, *Transportation*, for discussion). Further, the UPRR runs proximate to the construction  
40 area of the proposed Byron Forebay; however, construction is unlikely to disrupt rail service  
41 because much of this line has not been in service recently. Any potential effects on rail traffic during  
42 construction would be reduced with implementation of Mitigation Measure TRANS-1a, which would  
43 include stipulations to coordinate with rail providers to develop alternative interim transportation  
44 modes (e.g., trucks or buses) that could be used to provide freight and/or passenger service during  
45 any longer term railroad closures and daily construction time windows during which construction  
46 would be restricted or rail operations would need to be suspended for any activity within railroad

1 rights of way. This would minimize the potential risk of release of hazardous materials being  
2 transported via these rails.

3 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design will minimize, to  
4 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
5 is suspected or has been verified. Further, environmental commitments would be implemented,  
6 including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical  
7 characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. Together,  
8 these commitments would reduce these potential hazards associated with water conveyance  
9 facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a and HAZ-1b,  
10 UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in  
11 Chapter 19, *Transportation*) would further reduce the potential severity of this impact. As such,  
12 construction of the water conveyance facilities would not create a substantial hazard to the public or  
13 the environment through the routine transport, use, or disposal of hazardous materials or the  
14 upset/accidental release of these materials. Therefore, this impact would not be adverse.

15 **CEQA Conclusion:** Similar to Alternative 1A, construction of the water conveyance facilities under  
16 Alternative 2A presents the potential for a direct significant impact on construction personnel, the  
17 public and/or the environment associated with a variety of physical and chemical hazardous  
18 conditions because of the intensity of construction activities at the north Delta intakes, forebays and  
19 conveyance pipelines and tunnels and the hazardous materials that would be needed in these areas  
20 during construction. Potential hazards include the routine use of hazardous materials (as defined by  
21 Title 22 of the California Code of Regulations, Division 4.5); natural gas accumulation in water  
22 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment, and  
23 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
24 electrical transmission lines; and hazardous constituents present in RTM. Many of these physical  
25 and chemical hazardous conditions would occur in close proximity to the towns of Hood and  
26 Courtland during construction of the north Delta intakes and the intermediate forebay. Potential  
27 differences between this alternative and Alternative 1A would result from hazards associated with  
28 site-specific contaminants or hazardous materials present in the soil, river sediment, or  
29 infrastructure that would be disturbed with construction of Intakes 6 and 7, if these locations were  
30 chosen instead of Intakes 4 and 5, and the operable barrier at the head of Old River. Additionally, the  
31 potential would exist for the construction of the water conveyance facilities to indirectly result in  
32 the release of hazardous materials through the disruption of existing road, rail, or river hazardous  
33 materials transport routes because construction would occur in the vicinity of three hazardous  
34 material transport routes, three railroad corridors, and waterways with barge traffic and would  
35 require construction traffic that could disrupt these routes. For these reasons, this is considered a  
36 significant impact. However, with the implementation of the previously described environmental  
37 commitments (e.g., SWPPPs, HMMPs, SPCCPs, SAPs, and a Barge Operations Plan) and Mitigation  
38 Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and*  
39 *Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the water  
40 conveyance facilities would not create a substantial hazard to the public or the environment through  
41 the routine transport, use, or disposal of hazardous materials or the upset/accidental release of  
42 these materials. As such, these impacts would be less than significant.

1           **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2           **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3           **Construction Footprint, and Remediate and/or Contain Contamination**

4           Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5           1A.

6           **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7           **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8           **Dispose of Them in Accordance with Applicable Regulations**

9           Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10          1A.

11          **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12          Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13          Chapter 20, *Public Services and Utilities*.

14          **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15          **Minimizes Any Effect on Worker and Public Health and Safety**

16          Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17          Chapter 20, *Public Services and Utilities*.

18          **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19          **Plan**

20          Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21          1A in Chapter 19, *Transportation*.

22          **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 23          **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 24          **Facilities**

25          **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
 26          an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
 27          pose a health hazard. However, no schools, parks or hospitals are located within 0.25 mile of  
 28          Alternative 2A. However, under this alternative, an operable barrier would be constructed at the  
 29          head of Old River near the Mossdale Village area of Lathrop, adjacent to land designated for public  
 30          use and which could include future schools or parks. If a school or park were built prior to the  
 31          completion of construction of the operable barrier, sensitive receptors would be in close proximity  
 32          to BDCP construction activities, creating the potential for an adverse effect. However, because there  
 33          is currently no school or park within 0.25 mile of the operable barrier site, and because no school or  
 34          park is currently proposed within 0.25 mile of that site, there would be no adverse effect on  
 35          sensitive receptors at this site.

36          Therefore, no sensitive receptors would be exposed to hazardous materials, substances, or waste  
 37          during construction of the water conveyance facilities under Alternative 2A. As such, there would be  
 38          no effect. Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality*  
 39          *and Greenhouse Gases*.

1 **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
 2 Alternative 2A water conveyance facilities alignment. Where the construction of a school or park is  
 3 to be completed near the Mossdale Village area of Lathrop prior to the completion of construction of  
 4 the operable barrier, sensitive receptors would be in close proximity to construction activities under  
 5 this alternative, creating a potential significant impact. However, because no school or park is  
 6 currently proposed within 0.25 mile of the proposed operable barrier site, there would be no  
 7 impact. Therefore, for this alternative there would be no impact due to exposure of sensitive  
 8 receptors to hazardous materials, substances or waste during construction of the water conveyance  
 9 facilities. No mitigation is required. Potential air quality effects on sensitive receptors are discussed  
 10 in Chapter 22, *Air Quality and Greenhouse Gases*.

11 Where the construction of a school or park is to be completed prior to the completion of  
 12 construction of the operable barrier, sensitive receptors would be in close proximity to construction  
 13 activities under this alternative, creating a potential significant impact. However, because no school  
 14 or park is currently proposed within 0.25 mile of the proposed operable barrier site, there would be  
 15 no impact.

16 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 17 **Create a Significant Hazard to the Public or the Environment**

18 **NEPA Effects:** Effects related to sites on the “Cortese List” and SOCs would be similar to those  
 19 described under Alternative 1A. Potential differences under this alternative would arise from any  
 20 hazardous materials sites encountered in the construction of Intakes 6 and 7, if these locations were  
 21 chosen, as well as the potential construction of an operable barrier at the head of Old River;  
 22 however, there are no known hazardous materials sites in the construction footprint for those  
 23 intakes nor in the footprint for the pipelines to those intakes.

24 There are no “Cortese List” sites or known SOCs within the construction footprint of Alternative 2A  
 25 (Table 24-5 and Figure 24-4), and therefore there would be no conflict pertaining to a known  
 26 hazardous materials site during construction of the water conveyance facilities and thus, no related  
 27 hazard to the public or the environment. For those hazardous materials sites identified within the  
 28 0.5-mile radius, but which are not within the construction footprint (Table 24-5), there would be no  
 29 potential for the construction of the water conveyance facilities to disturb those sites such that there  
 30 would be a re-release of hazardous materials that would create a hazard for the public or  
 31 environment. Therefore, there would be no effect. The potential for encountering unknown  
 32 hazardous materials sites during the course of construction is discussed under Impact HAZ-1.

33 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
 34 conveyance facility under this alternative, there would be no conflict with known hazardous  
 35 materials sites during construction of the water conveyance facilities, and therefore, no related  
 36 hazard to the public or the environment. As such, there would be no impact. No mitigation is  
 37 required. The potential for encountering unknown hazardous materials sites during the course of  
 38 construction is discussed under Impact HAZ-1.

39 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 40 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 41 **Study Area during Construction of the Water Conveyance Facilities**

42 **NEPA Effects:** Development around an airport, particularly in the approach and departure paths, can  
 43 create obstructions in the airspace traversed by an approaching or departing aircraft. Additionally,

1 certain land uses have the potential to create hazards to aircraft such as a distracting glare, smoke,  
 2 steam, or invisible heat plumes. Safety impacts from aircraft accidents near airports are typically  
 3 avoided by specifying the types of land uses allowed, and thereby limiting the number of people who  
 4 would be exposed to the risk of an accident, and avoiding land uses that could create hazards to air  
 5 traffic. Airspace protection primarily involves limitations on the height of objects on the ground near  
 6 airports.

7 Safety hazards to aircraft posed by high-profile (200 feet or taller) construction equipment such, as  
 8 tall cranes and pile drivers, or structures (e.g., proposed transmission lines and towers) would be  
 9 similar as those described under Alternative 1A. Potential differences would result from different  
 10 locations for equipment if Intakes 6 and 7 were constructed, as well as the potential for additional  
 11 equipment necessary for the construction of an operable barrier. The Borges-Clarksburg, Walnut  
 12 Grove, and Spezia Airports (all private air facilities), and the Byron Airport (a public air facility) are  
 13 located within 2 miles of the construction footprint of this alternative.

14 DWR would adhere to all applicable FAA regulations prior to and during construction of water  
 15 conveyance facilities, including complying with the recommendations of an OE/AAA (14 CFR Part  
 16 77) for Byron Airport. Additionally, as previously discussed, construction of a state building or  
 17 enclosure within 2 miles of any airport is subject to review by Caltrans' Division of Aeronautics prior  
 18 to initiating construction to help ensure that adverse effects on air safety are avoided. DWR would  
 19 adhere to Caltrans' recommendations based on its review in order to avoid any adverse effects on  
 20 air safety. Therefore, there would be no adverse effects on air traffic safety related to construction of  
 21 the water conveyance facilities under this alternative.

22 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 23 of high-profile construction equipment, such as cranes, for installation of pipelines, and potentially  
 24 pile drivers, such as would be used during the construction of the intakes, have the potential to  
 25 result in safety hazards to aircraft during takeoff and landing if the equipment is operated too close  
 26 to runways. Three private airports (Borges-Clarksburg, Spezia, and Walnut Grove Airports) and one  
 27 public airport (Byron Airport) are located within 2 miles of the construction footprint of Alternative  
 28 2A. DWR would coordinate with Caltrans' Division of Aeronautics prior to initiating construction  
 29 and comply with its recommendations based on site investigation(s), as well as comply with the  
 30 recommendations of the OE/AAA (for Byron Airport). Compliance with these recommendations,  
 31 which could include limitations necessary to minimize potential problems, such as the use of  
 32 temporary construction equipment, supplemental notice requirements, and marking and lighting  
 33 high-profile structures would reduce the potential for impacts on air safety. Accordingly, this impact  
 34 would be less than significant. No mitigation is required.

35 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 36 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 37 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 38 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

39 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 40 Alternative 1A. The northernmost and southernmost extent of this conveyance alignment would be  
 41 adjacent to areas designated Moderate Fire Hazard Severity Zones.

42 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 43 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 44 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire

1 safety and prevention. Additionally, DWR would develop and implement a FPCP in coordination  
 2 with federal, state, and local agencies. Implementation of these would help ensure that people or  
 3 structures would not be subject to a significant risk of loss, injury or death involving wildland fires.  
 4 Consequently, this effect would not be adverse.

5 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 6 death involving wildland fires during construction or operation and maintenance of the proposed  
 7 water conveyance facilities because the BDCP would comply with Cal-OSHA fire prevention and  
 8 safety standards; implement standard fire safety and prevention measures, as part of a FPCP  
 9 (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water conveyance  
 10 facilities would not be located in a High or Very High Fire Hazard Severity Zone. Therefore, this  
 11 impact would be less than significant. No mitigation is required.

12 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 13 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 14 **Water Conveyance Facilities**

15 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 16 conveyance facilities would be similar to those described for Alternative 1A. Under this alternative,  
 17 however, Intakes 6 and 7 may be selected instead of Intakes 4 and 5, presenting potential variation  
 18 in the location of possible hazards. Additionally, operation and maintenance activities associated  
 19 with an operable barrier could expand the potential for hazards. This alternative may require the  
 20 transport, storage, and use of chemicals or hazardous waste materials, including fuel, oils, grease,  
 21 solvents, and paints. Solids collected at solids lagoons and sediment dredged during periodic  
 22 maintenance dredging at the operable barrier at the head of Old River and at intakes may contain  
 23 potentially hazardous constituents (e.g., persistent pesticides, mercury, PCBs). To ensure that  
 24 potentially contaminated sediment from maintenance dredging activities at the intakes would not  
 25 adversely affect soil, groundwater or surface water, a SAP would be implemented prior to any  
 26 dredging activities, as described under Impact HAZ-1 for this alternative. All sediment would be  
 27 characterized chemically prior to reuse to ensure that reuse of this material would not result in a  
 28 hazard to the public or the environment.

29 The Borges-Clarksburg, Walnut Grove, and Spezia Airports (private air facilities), and the Byron  
 30 Airport (a public air facility) are located within 2 miles of the Alternative 2A construction footprint  
 31 (Figure 24-9 and Table 24-6). With the exception of power transmission lines supplying power to  
 32 pumps, surge towers, and other equipment used for water conveyance facilities operation and  
 33 maintenance, water conveyance facilities operations and maintenance are not anticipated to require  
 34 high-profile equipment, the use of which near an airport runway could result in an adverse effect on  
 35 aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and would  
 36 coordinate with Caltrans' Division of Aeronautics prior to any maintenance activities requiring high-  
 37 profile maintenance equipment. DWR would comply with any recommendation Caltrans may have  
 38 to ensure that there is no conflict with or adverse effect on air traffic. Compliance with these  
 39 recommendations, which could include limitations necessary to minimize potential problems, such  
 40 as the use of temporary construction equipment, supplemental notice requirements, and marking  
 41 and lighting high-profile structures would reduce the potential for impacts on air safety.

42 There are no sensitive receptors (i.e., schools, hospitals and parks) located within 0.25 mile of  
 43 Alternative 2A.

1 Because the types of potentially hazardous materials used during routine operation and  
2 maintenance activities would be used in relatively small quantities, and because BMPs, as would be  
3 implemented in the SWPPPs, SPCCPs, and HMMPs (as detailed in Appendix 3B, *Environmental*  
4 *Commitments, AMMs, and CMs*), would be in place to help prevent the inadvertent release of these  
5 materials and to contain and remediate spills should they occur, the risk to the public and  
6 environment would be negligible.

7 Improper disposal of potentially contaminated (e.g., persistent pesticides and mercury) lagoon  
8 solids could result in contamination of soil, groundwater and surface water, which would be  
9 considered an adverse effect. However, with implementation of Mitigation Measure HAZ-6, solids  
10 from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
11 disposed of accordingly at an appropriate, licensed facility to avoid an adverse effect.

12 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
13 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
14 substantial hazard to the public or the environment and would not result in an adverse effect.

15 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
16 operation and maintenance of the water conveyance facilities and the potential interference with air  
17 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
18 could have impacts on the public and environment. However, implementation of the BMPs and other  
19 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
20 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
21 when performing work with high-profile equipment within 2 miles of an airport, which would  
22 include implementation of recommendations to provide supplemental notice and/or equip high-  
23 profile structures with marking and lighting, would ensure that operation and maintenance of the  
24 water conveyance facilities would not create a substantial hazard to the public, environment or air  
25 traffic safety. Improper disposal of potentially contaminated lagoon solids could result in  
26 contamination of soil, groundwater and surface water, which would be considered a significant  
27 impact. With implementation of Mitigation Measure HAZ-6, solids from the solids lagoons, which  
28 could contain hazardous constituents such as persistent pesticides and mercury, would be sampled  
29 and characterized to evaluate disposal options, and would be disposed of accordingly at an  
30 appropriate, licensed facility ensuring that there would be no significant impact on the public or the  
31 environment.

32 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
33 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
34 substantial hazard to the public or the environment. Accordingly, this impact would be less than  
35 significant.

36 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
37 **and/or Disposal**

38 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
39 1A.

1 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 2 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 3 **CM13, CM14, CM16, CM18 and CM19**

4 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 5 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 6 workers, the public, and the environment would be similar to those described under Alternative 1A.  
 7 Hazardous materials associated with the operation of construction equipment could be  
 8 inadvertently released into the environment in the course of the materials' routine transport, use, or  
 9 disposal. Releases could also occur as a result of accidental circumstances during operation and  
 10 maintenance activities, such as the application of herbicides to control nonnative vegetation.  
 11 Similarly, construction activities could encounter known or unknown hazardous materials sites  
 12 located on or in the vicinity of construction sites, creating the potential for their disturbance and  
 13 release. Other activities, including the intentional demolition of existing structures (e.g., buildings)  
 14 and reuse of spoil, dredged material and/or RTM, would also present the potential to generate  
 15 hazards or release hazardous materials. However, prior to the reuse of spoils, dredged material or  
 16 RTM, these materials would undergo chemical characterization, as described in Appendix 3B,  
 17 *Environmental Commitments, AMMs, and CMs*, to ensure that they are not creating a hazard to the  
 18 public and environment. Further, other potential hazards that could result from implementing  
 19 conservation measures include the possible release of hazardous substances in proximity to  
 20 sensitive receptors; the release, in the short-term, of pesticides from former agricultural lands as a  
 21 result of wetland and floodplain restoration; the potential for safety hazards related to construction  
 22 in the vicinity of an airport; damage or disruption of existing infrastructure such that hazardous  
 23 conditions were created; and the potential for wildfire hazards in the vicinity of construction sites.

24 These potential effects, were they to occur, would be considered adverse. However, the proposed  
 25 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
 26 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
 27 suspected or has been verified. In addition, as discussed under Impact HAZ-7 for Alternative 1A,  
 28 with implementation of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a, and  
 29 environmental commitments (discussed previously for Impacts HAZ-1 through HAZ-6, and in detail  
 30 in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), the potential for substantial hazards  
 31 to the public or environment would be reduced and, accordingly, this effect would not be adverse.

32 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
 33 public to hazardous substances or conditions during construction, operation, and maintenance of  
 34 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 35 implementation would involve extensive use of heavy equipment during construction, and/or the  
 36 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 37 for nonnative vegetation control). These chemicals could be inadvertently released and could expose  
 38 construction workers or the public to hazards. Construction of restoration projects on or near  
 39 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 40 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 41 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
 42 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
 43 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
 44 ensure that these potential impacts would be less than significant.

1           **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2           **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3           **Construction Footprint, and Remediate and/or Contain Contamination**

4           Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5           1A.

6           **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7           **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8           **Dispose of Them in Accordance with Applicable Regulations**

9           Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10          1A.

11          **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12          Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13          Chapter 20, *Public Services and Utilities*.

14          **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15          **Minimizes Any Effect on Worker and Public Health and Safety**

16          Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17          Chapter 20, *Public Services and Utilities*.

18          **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19          **Plan**

20          Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21          1A in Chapter 19, *Transportation*.

22          **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 23          **Conservation Measures that Create or Improve Wildlife Habitat**

24          **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 25          wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 26          strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 27          from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 28          areas for restoration activities based on the location of the physical water conveyance features  
 29          associated with each alternative. Such variation may result greater or less opportunity for bird-  
 30          aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 31          because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 32          zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 33          Airport; Sacramento International Airport, and Byron Airport.

34          The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 35          because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 36          would reduce the severity of this effect through the development and implementation of measures  
 37          to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 38          adverse.

1 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 2 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 3 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 4 significant impacts on public safety. The following airports, because they are in relatively close  
 5 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 6 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 7 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 8 through the ultimate development and implementation of measures to reduce, minimize and/or  
 9 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 10 significant and unavoidable.

11 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 12 **Regulatory Agencies**

13 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 14 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 15 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 16 extent possible.

17 **24.3.3.6 Alternative 2B—Dual Conveyance with East Alignment and Five**  
 18 **Intakes (15,000 cfs; Operational Scenario B)**

19 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 20 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 21 **Conveyance Facilities**

22 **NEPA Effects:** Hazards to the public or the environment through the routine transport, use, or  
 23 disposal of hazardous materials during construction of the water conveyance facilities for Alternative  
 24 2B would be similar to those described under Alternative 1B. However, under Alternative 2B,  
 25 Intakes 6 and 7 could be constructed instead of Intakes 4 and 5, as would an operable barrier at the  
 26 head of Old River. Although, despite the potentially different locations for selected intakes and the  
 27 construction of an operable barrier, it is anticipated that effects associated with the transport and  
 28 use of fuels for this alternative would be similar to those described for Alternative 1B. Construction  
 29 of an operable barrier at the head of Old River would create a marginally higher potential for  
 30 hazards. Construction of this barrier would add an additional location where hazardous materials  
 31 could potentially be released during storage, use, or transport. Additionally, land-based and in-water  
 32 construction activities, including dredging, associated with this barrier could potentially encounter  
 33 and release contaminated soil, groundwater, or sediment.

34 As described in Chapter 3, *Description of Alternatives*, during construction of Alternative 2B six  
 35 locations would be designated as temporary fuel stations. Each fuel station would occupy two acres  
 36 and each would be located adjacent to a concrete batch plant. Fuel station locations are shown in  
 37 Figure 24-7. Fuel stations would be established in currently rural areas with two at the intakes on  
 38 the northern end of the conveyance alignment, three along the length of the canal alignment and one  
 39 fuel station would be near the pumping facilities on the southern end. Bulk fuel would be stored at  
 40 fuel stations and potentially pose the risk of vehicle fueling spills and leakage from above-ground  
 41 storage tanks at fuel stations.

1 Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil,  
2 river sediment or groundwater, hazardous constituents present in RTM, infrastructure containing  
3 hazardous materials, and the disruption of existing hazardous materials transport routes would be  
4 similar to those described under Alternative 1B. However, the locations and extent of these hazards  
5 would be different than Alternative 1B due to the potentially different intake locations and the  
6 construction of an operable barrier at the head of Old River. Under this alternative, there are 13  
7 overhead power/electrical transmission lines and 5 natural gas pipelines and 4 petroleum product  
8 pipelines (Table 24-3), and 57 inactive and 4 active oil or gas wells within the proposed alternative  
9 alignment. The precise location of pipelines would be identified prior to construction to avoid  
10 conflicts with construction. Abandoned wells would be tested to confirm that they have been  
11 abandoned according to DOGGR well abandonment requirements. Those wells not abandoned  
12 according to these requirements will be improved. In addition, to avoid the potential conflicts with  
13 shaft construction and disposal areas, the utility and infrastructure relocation will be coordinated  
14 with local agencies and owners.

15 Alternative 2B water conveyance construction footprint (California Department of Water Resources  
16 2010b:13-1). Further, water conveyance facilities construction under this alternative would also  
17 require in-channel dredging (e.g., for construction of the operable barrier at the head of Old River),  
18 which would result in the resuspension of potentially contaminated sediments.

19 If Intakes 4 and 5 were constructed, approximately 409 structures would be removed or relocated  
20 under Alternative 2B. This would include approximately 109 residential structures; 22 recreational  
21 structures; 257 storage and agricultural support structures; and 21 other types of structures (e.g.,  
22 power/utility structures, bridges, and other types of infrastructure). If Intakes 6 and 7 were  
23 constructed instead of Intakes 4 and 5, approximately 22 additional structures would be disrupted  
24 including approximately 121 residential structures; 23 recreational structures; 262 storage/support  
25 structures; and 25 other types of structures. These structures may contain hazardous materials that  
26 would require proper handling and disposal, if demolition is necessary. As described for Impact  
27 HAZ-1 under Alternative 1A, Mitigation Measure HAZ-1b would be implemented by DWR to ensure  
28 that there are no adverse effects related to structure demolition due to hazardous materials.

29 Risks associated with the transportation of hazardous materials via truck, trains, and ships would be  
30 similar to those described under Alternative 1A but would occur in different areas. Hazardous  
31 materials transportation routes that would be used under this alternative are presented in Figure  
32 24-2 and in Table 24-4. Routes anticipated to be affected during construction of the water  
33 conveyance facilities are listed in Chapter 19, *Transportation*. Under Mitigation Measure TRANS-1a,  
34 a site-specific construction traffic management plan, taking into account hazardous materials  
35 transportation, would be prepared and implemented prior to initiation of water conveyance  
36 facilities construction. This mitigation measure would reduce the potential for effects on hazardous  
37 materials transportation routes in the study area. Barges supporting water conveyance facilities  
38 construction may also transport hazardous materials such as fuels and lubricants or other  
39 chemicals. The potential exists for accidental release of hazardous materials from project-related  
40 barges. To avoid effects on the environment related to this issue, BMPs would be implemented as  
41 part of a Barge Operations Plan (as discussed under Impact HAZ-1 for Alternative 1A and in  
42 Appendix 3B, *Environmental Commitments, AMMs, and CMs*) that would reduce the potential for  
43 accidental releases of hazardous materials during transport and transfer. Further, the Alternative 2B  
44 water conveyance facilities alignment would cross one railroad ROW at the BNSF railroad in San  
45 Joaquin County near Holt. A culvert siphon would be built at this rail crossing, reducing potential  
46 hazards associated with rail transportation. Two segments of a UPRR line would intersect with

1 bridge facilities constructed east of the intake facilities and other construction work areas would be  
2 immediately adjacent to an out-of-service UPRR Tracy Subdivision branch line near the California  
3 Aqueduct at the southern end of the water conveyance facilities. Because these crossings are in  
4 construction work areas, train operations along the BNSF Railway/Amtrak San Joaquin Line could  
5 be affected. Additional conflicts could arise if the out-of-service UPRR line were reopened. Mitigation  
6 Measure TRANS-1a would include stipulations to coordinate with rail providers to develop  
7 alternative interim transportation modes (e.g., trucks or buses) that could be used to provide freight  
8 and/or passenger service during any longer term railroad closures and daily construction time  
9 windows during which construction would be restricted or rail operations would need to be  
10 suspended for any activity within railroad rights of way. This would minimize the potential risk of  
11 release of hazardous materials being transported via these rails.

12 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would minimize, to  
13 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
14 is suspected or has been verified. Further, environmental commitments would be implemented,  
15 including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical  
16 characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. Together, the  
17 environmental commitments would reduce these potential hazards associated with water  
18 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
19 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
20 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact.  
21 As such, construction of the water conveyance facilities would not create a substantial hazard to the  
22 public or the environment through the routine transport, use, or disposal of hazardous materials or  
23 the upset/accidental release of these materials. Therefore, this effect would not be adverse.

24 **CEQA Conclusion:** During construction of the water conveyance facilities, the potential would exist  
25 for direct significant impacts on construction personnel, the public and/or the environment  
26 associated with the routine use of hazardous materials; natural gas accumulation in water  
27 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment, and  
28 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
29 electrical transmission lines; and potentially hazardous constituents present in RTM. Additionally,  
30 the potential would exist for the construction of the water conveyance facilities to indirectly result  
31 in the release of hazardous materials through the disruption of existing road, rail, or river hazardous  
32 materials transport routes, which, were this to occur, would be considered a significant impact.  
33 Potential differences between this alternative and Alternative 1B would result from hazards  
34 associated with site-specific contaminants or hazardous materials present in the soil, river  
35 sediment, or infrastructure that would be disturbed with construction of Intakes 6 and 7, if these  
36 locations were chosen instead of Intakes 4 and 5, and the operable barrier at the head of Old River.  
37 However, with the implementation of the previously described environmental commitments (for  
38 Impact HAZ-1 under Alternative 1A) and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c  
39 (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19,  
40 *Transportation*), construction of the water conveyance facilities would not create a substantial  
41 hazard to the public or the environment through the routine transport, use, or disposal of hazardous  
42 materials or the upset/accidental release of these materials. As such, these impacts would be less  
43 than significant.

1       **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2       **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3       **Construction Footprint, and Remediate and/or Contain Contamination**

4       Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5       1A.

6       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8       **Dispose of Them in Accordance with Applicable Regulations**

9       Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10      1A.

11      **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12      Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13      Chapter 20, *Public Services and Utilities*.

14      **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15      **Minimizes Any Effect on Worker and Public Health and Safety**

16      Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17      Chapter 20, *Public Services and Utilities*.

18      **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19      **Plan**

20      Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21      1A in Chapter 19, *Transportation*.

22      **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 23      **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 24      **Facilities**

25      **NEPA Effects:** There are no schools or hospitals within 0.25 mile of Alternative 2B. However,  
 26      Buckley Cove Park and Nelson Park, both in Stockton, are within 0.25 mile of the construction  
 27      footprint of Alternative 2B. Buckley Cove Park is located west of a proposed borrow and/or spoils  
 28      area across the Stockton Deep Water Ship Channel, and Nelson Park is just north of a proposed  
 29      temporary 69-kV transmission line (Figure 24-8). Because large construction equipment, such as  
 30      dump trucks, diggers, back hoes, and potentially cranes (for the installation of the temporary  
 31      transmission line) could be operating in these areas, there could be the potential for oil leakage from  
 32      these vehicles. However, if this were to occur, it would be localized and minimal. Furthermore,  
 33      environmental commitment measures (Appendix 3B, *Environmental Commitments, AMMs, and CMs*)  
 34      implemented as part of the HMMPs, SPCCPs, and SWPPPs, including positioning all stationary  
 35      equipment over drip pans, and immediately cleaning up spills and leaks and disposing of properly,  
 36      would ensure that equipment leaks are contained and remediated. Therefore, people at these parks  
 37      would not be at risk or adversely affected by exposure to hazardous materials, substances, or waste  
 38      during construction of the water conveyance facilities.

1 In addition, under this alternative, an operable barrier would be constructed at the head of Old River  
2 near the Mossdale Village area of Lathrop, adjacent to land designated for public use and which  
3 could include future schools or parks. If a school or park were built prior to the completion of  
4 construction of the operable barrier, sensitive receptors would be in close proximity to BDCP  
5 construction activities, creating the potential for an adverse effect. However, no school or park is  
6 currently proposed within 0.25 mile of the proposed operable barrier site; therefore, there would be  
7 no adverse effect.

8 Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
9 *Greenhouse Gases*, and potential EMF effects on sensitive receptors are discussed in Chapter 25,  
10 *Public Health*.

11 **CEQA Conclusion:** Buckley Cove and Nelson Parks in Stockton are within 0.25 mile of the  
12 construction footprint of Alternative 2B. Buckley Cove Park is west of a proposed borrow and/or  
13 spoils area across the Stockton Deep Water Ship Channel, and Nelson Park is just north of a  
14 proposed temporary 69-kV transmission line. Large construction equipment, such as dump trucks,  
15 diggers, back hoes, and potentially cranes would be operating in these areas during construction and  
16 there would be the potential for these vehicles to leak oil. However, if this were to occur, the leaks  
17 would be localized and minimal. Furthermore, environmental commitment measures (Appendix 3B,  
18 *Environmental Commitments, AMMs, and CMs*) implemented as part of the HMMPs, SPCCPs, and  
19 SWPPPs, including positioning all stationary equipment over drip pans, and immediately cleaning  
20 up spills and leaks and disposing of properly, would ensure that equipment leaks are contained and  
21 remediated. Therefore, people at these parks would not be at risk or affected. If the construction of a  
22 school or park were completed on land designated for public use near the Mossdale Village area of  
23 Lathrop prior to the completion of construction of the operable barrier, sensitive receptors would be  
24 in close proximity to BDCP construction activities, creating a potential significant impact. However,  
25 no school or park is currently proposed within 0.25 mile of the proposed operable barrier site,  
26 therefore there would be no impact. Because people at Buckley Cove and Nelson Parks would not be  
27 exposed to hazardous materials, substances, or waste during construction of the water conveyance  
28 facilities, this impact would be less than significant. Potential air quality effects on sensitive  
29 receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*, and potential EMF effects  
30 on sensitive receptors are discussed in Chapter 25, *Public Health*.

### 31 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,** 32 **Create a Significant Hazard to the Public or the Environment**

33 **NEPA Effects:** Effects related to sites on the Cortese List and SOCs would be the same as those  
34 described under Alternative 1B. The Sarale Farms site (a "Cortese List" site) and Kinder Morgan  
35 Energy pipeline access station site are located within the construction footprints for proposed  
36 temporary 69-kV transmission lines (Table 24-5 and Figure 24-4). At the Sarale Farms site, a  
37 10,000-gallon petroleum UST was removed in 1992. Soil and groundwater contain petroleum  
38 products in excess of cleanup standards. The San Joaquin County Environmental Health Department  
39 issued a letter in December 2008 requiring continued monitoring of groundwater and additional  
40 assessment of groundwater for petroleum.

41 Because construction of the temporary transmission line would not entail deep excavation or  
42 require dewatering activities, no conflict with existing hazards at this site are anticipated. However,  
43 if dewatering and/or deep excavation were required in this area contaminated groundwater could  
44 be drawn up and/or contaminated soils may be disturbed, respectively. Improper disposal of

1 contaminated excavated soils or groundwater would have the potential to adversely affect the  
 2 environment. To avoid this potential adverse effect, Mitigation Measure HAZ-1a would be  
 3 implemented to ensure that any known or suspected soil and/or groundwater contamination is not  
 4 re-released. Further, design of the transmission line, including pole placement, would avoid the  
 5 Kinder Morgan Energy and Sarale Farms site to the extent practicable to ensure there were no  
 6 adverse hazardous effects associated with construction on or in close proximity to these sites.

7 For those hazardous materials sites identified within the 0.5-mile radius but which are not within  
 8 the construction footprint, there would be no potential for the construction of the water conveyance  
 9 facilities to disturb those sites such that there would be a re-release of hazardous materials that  
 10 would create a hazard for the public or environment. Therefore, this effect would not be adverse.  
 11 The potential for encountering unknown hazardous materials sites during the course of  
 12 construction is discussed under Impact HAZ-1, above.

13 **CEQA Conclusion:** The re-release of hazardous materials during construction activities (dewatering  
 14 and/or deep excavation) at the Sarale Farms site or the Kinder Morgan Energy pipeline access  
 15 station site within the construction footprints for proposed temporary 69-kV transmission lines  
 16 could result in a significant impact if contaminated groundwater and/or soils were rereleased.  
 17 However, a significant impact on the environment would be avoided with implementation of  
 18 Mitigation Measure HAZ-1a. Further, project design would minimize, to the extent feasible, the need  
 19 to traverse areas where the presence of hazardous materials is suspected or has been verified, or  
 20 where interference with existing infrastructure might result in hazards. As a result, there would be a  
 21 less-than-significant impact on the public and/or environment because construction of the water  
 22 conveyance facilities near the Kinder Morgan Energy pipeline access station site and the Sarale  
 23 Farms site would not result in hazardous materials releases from these sites. The potential for  
 24 encountering other unknown hazardous materials sites during the course of construction is  
 25 discussed under Impact HAZ-1, above.

26 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 27 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 28 **Construction Footprint, and Remediate and/or Contain Contamination**

29 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 30 1A.

31 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 32 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 33 **Study Area during Construction of the Water Conveyance Facilities**

34 **NEPA Effects:** Development around an airport, particularly in the approach and departure paths, can  
 35 create obstructions in the airspace traversed by an approaching or departing aircraft. Additionally,  
 36 certain land uses have the potential to create hazards to aircraft such as a distracting glare, smoke,  
 37 steam, or invisible heat plumes. Safety impacts from aircraft accidents near airports are typically  
 38 avoided by specifying the types of land uses allowed, and thereby limiting the number of people who  
 39 would be exposed to the risk of an accident, and avoiding land uses that could create hazards to air  
 40 traffic. Airspace protection primarily involves limitations on the height of objects on the ground near  
 41 airports.

42 Effects under this alternative with regard to creating safety hazards to air traffic as a result of  
 43 constructing the water conveyance facilities would be the same as under Alternative 1B. As shown

1 in Figure 24-9, the Borges-Clarksburg Airport, Byron Airport, and Lost Isle Seaplane Base are within  
 2 2 miles of the Alternative 2B water conveyance facilities. The Borges-Clarksburg Airport is a private,  
 3 special use airport with a land use plan. The Lost Isle Seaplane Base and Byron Airport are public  
 4 use airports and are subject to FAA regulations regarding construction within 10,000 feet.

5 Construction of a state building or enclosure within 2 miles of any airport is subject to review of  
 6 Caltrans' Division of Aeronautics for safety and noise effects. In the event final locations for any state  
 7 building or enclosure within 2 miles of any airport, Caltrans' Division of Aeronautics would require  
 8 written notification and a review would be performed. Caltrans would provide recommendations,  
 9 based on this review, to ensure that there were no impacts related to the construction of the water  
 10 conveyance facilities on air safety. DWR would comply with these recommendations to avoid  
 11 adverse effects. Additionally, depending on the location and height of any high-profile construction  
 12 equipment, the Lost Isle Seaplane Base and Byron Airport, because they are public air facilities, may  
 13 be subject to an OE/AAA to be performed by the FAA. BDCP compliance with the results of the  
 14 OE/AAA would reduce the risk of adverse effects on air traffic safety in the vicinity of these airports.  
 15 Therefore, there would be no adverse effect on air safety.

16 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 17 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 18 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
 19 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
 20 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
 21 is operated too close to runways. Two public airports (Lost Isle Seaplane Base and Byron Airport)  
 22 and one private airport (Borges-Clarksburg Airport) are located within 2 miles of the construction  
 23 footprint of Alternative 2B. DWR would coordinate with Caltrans' Division of Aeronautics prior to  
 24 initiating construction and would comply with its recommendations based on its investigation(s), as  
 25 well comply with the recommendations of the OE/AAA (for Byron Airport and the Lost Isle Seaplane  
 26 Base). Compliance with these recommendations, which could include limitations necessary to  
 27 minimize potential problems, such as the use of temporary construction equipment, supplemental  
 28 notice requirements, and marking and lighting high-profile structures would reduce the potential  
 29 for impacts on air safety. Accordingly, this impact would be less than significant. No mitigation is  
 30 required.

31 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 32 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 33 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 34 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

35 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 36 Alternative 1B. The northernmost and southernmost extent of this conveyance alignment would be  
 37 adjacent to zones of moderate fire hazard severity (Figure 24-10).

38 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 39 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 40 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire  
 41 safety and prevention. Additionally, DWR would develop and implement a FPCP in coordination  
 42 with federal, state, and local agencies. Implementation of these would help ensure that people or  
 43 structures would not be subject to a significant risk of loss, injury or death involving wildland fires.  
 44 Therefore, this effect would not be adverse.

1 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 2 death involving wildland fires during construction or operation and maintenance of the water  
 3 conveyance facilities under Alternative 2B because the BDCP would comply with Cal-OSHA fire  
 4 prevention and safety standards; implement standard fire safety and prevention measures, as part  
 5 of a FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
 6 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
 7 Therefore, this impact would be less than significant. No mitigation is required.

8 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 9 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 10 **Water Conveyance Facilities**

11 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 12 conveyance facilities would be similar to those described for Alternative 1B, particularly with  
 13 respect to intakes and intake pumping plants. This alternative may require the transport, storage,  
 14 and use of chemicals or hazardous waste materials including fuel, oils, grease, solvents, and paints.  
 15 Solids collected at the solids lagoons, and sediment dredged during periodic maintenance dredging  
 16 at the intakes and operable barrier at the head of Old River, may contain hazardous constituents  
 17 (e.g., persistent pesticides, mercury, PCBs). To ensure that potentially contaminated sediment from  
 18 maintenance dredging activities at the intakes would not adversely affect soil, groundwater or  
 19 surface water, a SAP would be implemented prior to any dredging activities, as described under  
 20 Impact HAZ-1 for this alternative. All sediment would be characterized chemically prior to reuse to  
 21 ensure that reuse of this material would not result in a hazard to the public or the environment.

22 Differences from Alternative 1B could result from potential hazards related to operational and  
 23 maintenance activities associated with the operable barrier at the head of Old River. For example,  
 24 sediment removal activities associated with barrier maintenance could encounter and release  
 25 contaminated sediments. This facility would require the use of oils and other hazardous materials.

26 As noted above, the Borges-Clarksburg Airport, Byron Airport, and Lost Isle Seaplane Base are  
 27 within 2 miles of the Alternative 2B water conveyance facilities. With the exception of the proposed  
 28 power transmission lines and towers, water conveyance facilities are not anticipated to require the  
 29 use of high-profile equipment during operations and maintenance. Depending on the location and  
 30 height of any equipment necessary for transmission line maintenance, the Lost Isle Seaplane Base  
 31 and Byron Airport, because they are public air facilities, would be subject to an OE/AAA to be  
 32 performed by the FAA. DWR would comply with recommendations based on the results of an  
 33 OE/AAA (14 CFR Part 77). Additionally, DWR would coordinate with Caltrans' Division of  
 34 Aeronautics prior to any maintenance activities requiring high-profile maintenance equipment and  
 35 comply with any recommendation Caltrans may have regarding air safety. Compliance with these  
 36 recommendations, which could include limitations necessary to minimize potential problems, such  
 37 as the use of temporary construction equipment, supplemental notice requirements, and marking  
 38 and lighting high-profile structures would reduce the potential for impacts on air safety. Therefore,  
 39 no adverse effects on air safety are anticipated due to operation and maintenance of the water  
 40 conveyance facilities.

41 Potential releases of hazardous materials associated with operation and maintenance of the water  
 42 conveyance facilities under this alternative could result in an adverse effect on workers, the public  
 43 (including sensitive receptors within 0.25 mile of the construction footprint), and the environment.  
 44 As indicated above under Impact HAZ-2 for this alternative, Buckley Cove and Nelson Parks are

1 within 0.25 mile of a proposed borrow/spoils area and a proposed temporary 69-kV transmission  
2 line, respectively. Because the proposed 69-kV transmission line is temporary, it would be removed  
3 following completion of the water conveyance facilities, and therefore no maintenance activities  
4 would occur in this area. No maintenance activities would take place in the borrow/spoils area, per  
5 se; however, should the spoils be used at some later time, heavy construction equipment such as  
6 dump trucks and excavators would be needed to move the spoils. Consequently, there could be the  
7 potential for oil leakage from these vehicles. Although there would be a risk of accidental spills of  
8 hazardous materials (e.g., fuels, solvents, paints) during facility operation and maintenance, the  
9 quantities of hazardous materials likely to be used during routine operations and maintenance are  
10 likely to be small, and were they to be released inadvertently, they would be localized. Further,  
11 BMPs to minimize the potential for the accidental release of hazardous materials and to contain and  
12 remediate hazardous spills, as part of the SWPPPs, SPCCPs, and HMMPs, would be implemented as  
13 set forth in Appendix 3B, *Environmental Commitments, AMMs, and CMs*. Therefore, it is unlikely that  
14 park visitors would be at risk or adversely affected.

15 Improper disposal of potentially contaminated (e.g., persistent pesticides and mercury) lagoon  
16 solids could result in contamination of soil, groundwater and surface water, which would be  
17 considered an adverse effect. With implementation of Mitigation Measure HAZ-6, solids from the  
18 solids lagoons would be sampled and characterized to evaluate disposal options, and disposed of  
19 accordingly at an appropriate, licensed facility in order to avoid adverse effects on the environment  
20 from potential contamination.

21 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
22 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
23 substantial hazard to the public or the environment and, accordingly, there would be no adverse  
24 effect.

25 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
26 operation and maintenance of the water conveyance facilities and the potential interference with air  
27 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
28 could have impacts on the public and environment. However, implementation of the BMPs and other  
29 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
30 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
31 when performing work with high-profile equipment within 2 miles of an airport, which would  
32 include implementation of recommendations to provide supplemental notice and/or equip high-  
33 profile structures with marking and lighting, would ensure that operation and maintenance of the  
34 water conveyance facilities would not create a substantial hazard to the public, environment or air  
35 traffic safety. Additionally, improper disposal of potentially contaminated (e.g., persistent pesticides  
36 and mercury) lagoon solids could result in contamination of soil, groundwater and surface water,  
37 which would be considered a significant impact. With implementation of Mitigation Measure HAZ-6,  
38 solids from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
39 disposed of accordingly at an appropriate, licensed facility to ensure that this impact would be less  
40 than significant.

41 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
42 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
43 substantial hazard to the public or the environment and, accordingly, this impact would be less than  
44 significant.

1           **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 2           **and/or Disposal**

3           Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
 4           1A.

5           **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 6           **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 7           **CM13, CM14, CM16, CM18 and CM19**

8           **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 9           the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 10          workers, the public, and the environment under Alternative 2B would be similar to those described  
 11          under Alternative 1A. Potential variation from Alternative 1A would be anticipated to be minor but  
 12          could result from the selection of different areas for restoration activities based on the location of  
 13          the physical water conveyance features associated with each alternative.

14          Hazardous materials associated with the operation of construction equipment could be released into  
 15          the environment in the course of the materials' routine transport, use, or disposal. Releases could  
 16          also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
 17          known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
 18          creating the potential for hazardous materials disturbance and release. Other activities, including  
 19          the intentional demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material  
 20          and/or RTM, would also present the potential to generate hazards or release hazardous materials.  
 21          However, prior to the reuse of spoils, dredged material or RTM, these materials would undergo  
 22          chemical characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and*  
 23          *CMs*, to ensure that they are not creating a hazard to the public and environment.

24          Further, other potential hazards that could result from implementing conservation measures  
 25          include the possible release of hazardous substances in proximity to sensitive receptors; the  
 26          accidental release of hazardous substances during operation and maintenance and/or transport  
 27          (e.g., herbicides for nonnative vegetation control); the release, in the short-term, of pesticides from  
 28          former agricultural lands as a result of wetland and floodplain restoration; damage or disruption of  
 29          existing infrastructure such that hazardous conditions were created; the potential for safety hazards  
 30          related to construction in the vicinity of an airport; and the potential for wildfire hazards in the  
 31          vicinity of construction sites.

32          These effects, were they to occur, would be considered adverse. However, the proposed  
 33          conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
 34          extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
 35          suspected or has been verified. Additionally, as discussed for Impact HAZ-7 under Alternative 1A,  
 36          with implementation of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, TRANS-1a, and  
 37          environmental commitments (discussed previously for Impacts HAZ-1 through HAZ-6, and in detail  
 38          in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), the potential for substantial hazards  
 39          to the public or environment would be reduced and, accordingly, this effect would not be adverse.

40          Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
 41          result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

1 **CEQA Conclusion:** The potential for impacts related to the release of, and exposure of workers and  
 2 the public to, hazardous substances or conditions during construction, operation, and maintenance  
 3 of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 4 implementation would involve extensive use of heavy equipment during construction, and/or the  
 5 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 6 for nonnative vegetation control). Hazardous materials could be inadvertently released, exposing  
 7 construction workers or the public to hazards. Construction of restoration projects on or near  
 8 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 9 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 10 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
 11 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
 12 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
 13 ensure that these potential impacts would be less than significant.

14 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 15 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 16 **Construction Footprint, and Remediate and/or Contain Contamination**

17 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 18 1A.

19 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 20 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 21 **Dispose of Them in Accordance with Applicable Regulations**

22 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 23 1A.

24 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

25 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 26 Chapter 20, *Public Services and Utilities*.

27 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 28 **Minimizes Any Effect on Worker and Public Health and Safety**

29 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 30 Chapter 20, *Public Services and Utilities*.

31 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 32 **Plan**

33 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 34 1A in Chapter 19, *Transportation*.

35 **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 36 **Conservation Measures that Create or Improve Wildlife Habitat**

37 **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 38 wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 39 strikes would be similar to the potential effects described under Alternative 1A. Potential variation

1 from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 2 areas for restoration activities based on the location of the physical water conveyance features  
 3 associated with each alternative. Such variation may result greater or less opportunity for bird-  
 4 aircraft strikes depending on the location's proximity to airport flight zones. The following airports,  
 5 because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 6 zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 7 Airport; Sacramento International Airport, and Byron Airport.

8 The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 9 because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 10 would reduce the severity of this effect through the development and implementation of measures  
 11 to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 12 adverse.

13 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 14 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 15 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 16 significant impacts on public safety. The following airports, because they are in relatively close  
 17 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 18 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 19 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 20 through the ultimate development and implementation of measures to reduce, minimize and/or  
 21 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 22 significant and unavoidable.

23 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 24 **Regulatory Agencies**

25 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 26 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 27 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 28 extent possible.

29 **24.3.3.7 Alternative 2C—Dual Conveyance with West Alignment and**  
 30 **Intakes W1–W5 (15,000 cfs; Operational Scenario B)**

31 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 32 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 33 **Conveyance Facilities**

34 **NEPA Effects:** For the duration of construction of the water conveyance facilities, potential hazards  
 35 associated with the routine use of hazardous materials; natural gas accumulation in tunnels; existing  
 36 contaminants in soil, groundwater, or sediment; hazardous constituents present in RTM;  
 37 infrastructure containing hazardous materials; and the routine transport of hazardous materials  
 38 would be similar to those described under Alternative 1C. However, construction of an operable  
 39 barrier at the head of Old River would create a marginally higher potential for hazards. Construction  
 40 of this barrier would add an additional location where hazardous materials could potentially be  
 41 released during storage, use, or transport. Additionally, land-based and in-water construction  
 42 activities—including dredging—associated with this barrier could potentially encounter and release

1 contaminated soil, groundwater, or sediment. Conflicts with existing infrastructure containing  
2 hazardous materials, such as gas and petroleum product pipelines, or unknown sites of hazardous  
3 materials also pose potential risks. The number of existing gas and petroleum product pipelines,  
4 transmission lines within the Alternative 2C construction footprint, and structures requiring  
5 demolition or relocation under this alternative would be the same as under Alternative 1C. The  
6 precise location of pipelines within a tunnel section would be identified prior to construction to  
7 avoid conflicts with shaft construction and disposal of RTM. Studies would be done prior to  
8 construction to identify the minimum allowable distance between existing gas wells and tunnel  
9 excavation. Abandoned wells would be tested to confirm that they have been abandoned according  
10 to DOGGR well abandonment requirements. Those wells not abandoned according to these  
11 requirements would be improved. In addition, to avoid the potential conflicts with shaft  
12 construction and disposal areas, the utility and infrastructure relocation would be coordinated with  
13 local agencies and owners. Further, as described for Impact HAZ-1 under Alternative 1A, Mitigation  
14 Measure HAZ-1b would be implemented by the project proponents to ensure that there are no  
15 adverse effects related to structure demolition due to hazardous materials.

16 Construction of the water conveyance facilities would create the potential for direct adverse effects  
17 on construction personnel, the public and/or the environment associated with the routine use of  
18 hazardous materials; natural gas accumulation in water conveyance tunnels; the inadvertent release  
19 of existing contaminants in soil, groundwater, and sediment, or hazardous materials in existing  
20 infrastructure to be removed; disturbance of electrical transmission lines; and hazardous  
21 constituents present in RTM. Additionally, there is the potential for the construction of the water  
22 conveyance facilities to indirectly result in the release of hazardous materials through the disruption  
23 of existing road, rail, and/or river hazardous materials transport routes, which, were this to occur,  
24 would be considered an adverse effect.

25 As noted in the discussion of Impact HAZ-1 under Alternative 1A project design would minimize, to  
26 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
27 is suspected or has been verified. Further, environmental commitments would be implemented,  
28 including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical  
29 characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. Together, the  
30 environmental commitments would reduce these potential hazards associated with water  
31 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
32 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
33 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact.  
34 As such, construction of the water conveyance facilities would not create a substantial hazard to the  
35 public or the environment through the routine transport, use, or disposal of hazardous materials or  
36 the upset/accidental release of these materials. Thus, this effect would not be adverse.

37 **CEQA Conclusion:** During construction of the water conveyance facilities, the potential would exist  
38 for direct significant impacts on construction personnel, the public and/or the environment  
39 associated with the routine use of hazardous materials; natural gas accumulation in water  
40 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment, and  
41 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
42 electrical transmission lines; and hazardous constituents present in RTM. Additionally, the potential  
43 would exist for the construction of the water conveyance facilities to indirectly result in the release  
44 of hazardous materials through the disruption of existing road, rail, or river hazardous materials  
45 transport routes, which, were this to occur, would be considered a significant impact. However, with  
46 the implementation of the previously described environmental commitments and Mitigation

1 Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and*  
 2 *Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the water  
 3 conveyance facilities would not create a substantial hazard to the public or the environment through  
 4 the routine transport, use, or disposal of hazardous materials or the upset/accidental release of  
 5 these materials. As such, these impacts would be less than significant.

6 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 7 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 8 **Construction Footprint, and Remediate and/or Contain Contamination**

9 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 10 1A.

11 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 12 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 13 **Dispose of Them in Accordance with Applicable Regulations**

14 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 15 1A.

16 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

17 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 18 Chapter 20, *Public Services and Utilities*.

19 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 20 **Minimizes Any Effect on Worker and Public Health and Safety**

21 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 22 Chapter 20, *Public Services and Utilities*.

23 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 24 **Plan**

25 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 26 1A in Chapter 19, *Transportation*.

27 **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 28 **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 29 **Facilities**

30 **NEPA Effects:** Potential effects related to the handling of hazardous materials as part of construction  
 31 of the water conveyance facilities would be similar to those described under Impact HAZ-2 for  
 32 Alternative 1C. There are no hospitals located within 0.25 mile of Alternative 2C. However, as shown  
 33 in Figure 24-8, Lakewood Drive, Sycamore Drive, and Summer Lake Community Parks in Oakley, and  
 34 Mokelumne High (Continuation) School in Courtland would be within 0.25 mile of the construction  
 35 footprint for this alternative. Sycamore Drive Park would be near a tunnel work area, and Lakewood  
 36 Drive and Summer Lake Community Parks, and Mokelumne High (Continuation) School would be  
 37 near a proposed temporary 69-kV transmission line construction footprint. In addition, under this  
 38 alternative, an operable barrier would be constructed at the head of Old River near the Mossdale  
 39 Village area of Lathrop, adjacent to land designated for public use and which could include future

1 schools or parks. If a school or park were built prior to the completion of construction of the  
 2 operable barrier, sensitive receptors would be in close proximity to BDCP construction activities,  
 3 creating the potential for an adverse effect. However, no school or park is currently proposed within  
 4 0.25 mile of the proposed operable barrier site.

5 Although there would be a risk of accidental spills and leaks of hazardous materials (e.g., fuels, oil,  
 6 solvents, paints) during facility construction, the quantities of hazardous materials likely to be used  
 7 during construction activities are likely to be small. Were hazardous materials to be released  
 8 inadvertently, spills would be localized. Further, BMPs to minimize the potential for the accidental  
 9 release of hazardous materials and to contain and remediate hazardous spills, as part of the  
 10 SWPPPs, SPCCPs, and HMMPs, would be implemented, as set forth in Appendix 3B, *Environmental*  
 11 *Commitments, AMMs, and CMs*. Therefore, it is unlikely that these sensitive receptors would be at  
 12 risk or adversely affected by exposure to hazardous materials, substances, or waste during  
 13 construction of the water conveyance facilities. Potential air quality effects on sensitive receptors  
 14 are discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

15 **CEQA Conclusion:** Lakewood Drive, Sycamore Drive, and Summer Lake Community Parks in Oakley,  
 16 and Mokelumne High (Continuation) School in Courtland are within 0.25 mile of the construction  
 17 footprint of Alternative 2C. Additionally, under this alternative, an operable barrier would be  
 18 constructed at the head of Old River near the Mossdale Village area of Lathrop, adjacent to land  
 19 designated for public use and which could include future schools or parks. If a school or park were  
 20 built prior to the completion of construction of the operable barrier, sensitive receptors would be in  
 21 close proximity to BDCP construction activities, creating the potential for an impact on those types  
 22 of sensitive receptors. However, no school or park is currently proposed within 0.25 mile of the  
 23 proposed operable barrier site.

24 During construction of the water conveyance facilities, there would be a risk of accidental spills of  
 25 hazardous materials. However, the potential for significant impacts on people at these parks due to  
 26 these potential inadvertent releases would be negligible because spills would likely be small and  
 27 localized. Further, BMPs to minimize the potential for the accidental release of hazardous materials  
 28 and to contain and remediate hazardous spills, as part of the SWPPPs, SPCCPs, and HMMPs, would  
 29 be implemented, as set forth in Appendix 3B, *Environmental Commitments, AMMs, and CMs*.  
 30 Therefore, these sensitive receptors would not be at risk or adversely affected by exposure to  
 31 hazardous materials, substances, or waste during construction of the water conveyance facilities. As  
 32 such, this impact would be less than significant.

33 Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
 34 *Greenhouse Gases*.

### 35 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,** 36 **Create a Significant Hazard to the Public or the Environment**

37 **NEPA Effects:** There are no Cortese List sites within the construction footprint of the Alternative 2C  
 38 water conveyance facilities. However, as indicated in Table 24-5 and Figure 24-4, Mill Site A, the site  
 39 of a former large agricultural mill, would be located in a potential borrow and/or spoils areas within  
 40 the construction footprint of this alternative. This site was identified as a SOC in the 2009 ISA.  
 41 However, there is no regulatory listing for this site, and no known hazardous materials occur at this  
 42 site. Consequently, the potential to conflict with hazardous materials at this site is assumed to be  
 43 minimal, and as such, there would be no hazard to the public or the environment due to  
 44 construction of the water conveyance facilities. Therefore, this effect would not be adverse.

1 For those hazardous materials sites identified within the 0.5-mile radius but which are not within  
 2 the construction footprint, there would be no potential for construction of the water conveyance  
 3 facilities to disturb those sites such that there would be a re-release of hazardous materials that  
 4 would create a hazard for the public or environment. The potential for encountering unknown  
 5 hazardous materials sites during the course of construction is discussed under Impact HAZ-1.

6 **CEQA Conclusion:** Mill Site A, the site of a former large agricultural mill, would be located in a  
 7 potential borrow and/or spoils area within the construction footprint of this alternative. There is no  
 8 regulatory listing for this site, and no known hazardous materials occur at this site. Therefore, the  
 9 potential risk to conflict with hazardous materials at this site is negligible, and there would be no  
 10 hazard to the public or the environment. Therefore, this impact would be less than significant. No  
 11 mitigation is required. The potential for encountering unknown hazardous materials sites during  
 12 the course of construction is discussed under Impact HAZ-1 for Alternative 1A.

13 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 14 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 15 **Study Area during Construction of the Water Conveyance Facilities**

16 **NEPA Effects:** Development around an airport, particularly in the approach and departure paths, can  
 17 create obstructions in the airspace traversed by an approaching or departing aircraft. Additionally,  
 18 certain land uses have the potential to create hazards to aircraft such as a distracting glare, smoke,  
 19 steam, or invisible heat plumes. Safety impacts from aircraft accidents near airports are typically  
 20 avoided by specifying the types of land uses allowed, and thereby limiting the number of people who  
 21 would be exposed to the risk of an accident, and avoiding land uses that could create hazards to air  
 22 traffic. Airspace protection primarily involves limitations on the height of objects on the ground near  
 23 airports.

24 Safety hazards related to air traffic would be the same as those described for Alternative 1C. Under  
 25 Alternative 2C, the water conveyance facilities would be within 2 miles of the Delta Air Park, Funny  
 26 Farm Airport, and Borges-Clarksburg Airport, all private facilities, and Byron Airport (a public air  
 27 facility), as shown in Figure 24-9. The use of helicopters for stringing the proposed 230-kV  
 28 transmission lines and of high-profile construction equipment (200 feet or taller), such as cranes, for  
 29 installation of pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet  
 30 piles, for example, and potentially pile drivers, such as would be used during the construction of the  
 31 intakes, have the potential to result in safety hazards to aircraft during takeoff and landing if the  
 32 equipment is operated too close to runways. Depending on the location and height of any high-  
 33 profile construction equipment or structures relative to the Byron Airport, because it is a public air  
 34 facility, the BDCP may be subject to an OE/AAA to be performed by the FAA, as discussed under  
 35 Impact HAZ-4 for Alternative 1A. Compliance with the results of the OE/AAA (14 CFR Part 77),  
 36 would reduce the risk of adverse effects on air traffic safety due to water conveyance facility  
 37 construction activities in the vicinity of this airport. In addition, the Caltrans' Division of Aeronautics  
 38 would be informed in writing, as discussed under Impact HAZ-4 for Alternative 1A, and project  
 39 proponents would comply with Caltrans' recommendations to avoid any adverse effects on air  
 40 safety. Consequently, there would be no adverse effect on air safety during construction of the water  
 41 conveyance facilities.

42 **CEQA Conclusion:** The Delta Air Park, Funny Farm Airport, and Borges-Clarksburg Airport, all  
 43 private airstrips, and Byron Airport, a public air facility, would be within 2 miles of the construction  
 44 footprint of several proposed water conveyance facilities features, as well as associated work areas

1 for Alternative 2C. The use of helicopters for stringing the proposed 230-kV transmission lines and  
 2 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 3 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
 4 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
 5 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
 6 is operated too close to runways. Project proponents would coordinate with Caltrans' Division of  
 7 Aeronautics prior to initiating construction and comply with its recommendations based their  
 8 review, as well comply with the recommendations of the OE/AAA (for Byron Airport). Compliance  
 9 with these recommendations, which could include limitations necessary to minimize potential  
 10 problems, such as the use of temporary construction equipment, supplemental notice requirements,  
 11 and marking and lighting high-profile structures would reduce the potential for impacts on air  
 12 safety. Accordingly, the impacts on air safety would be less than significant. No mitigation is  
 13 required.

14 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 15 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 16 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 17 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

18 **NEPA Effects:** Potential hazards related to wildland fire would be similar to those described under  
 19 Alternative 1C, but would carry the potential to affect an additional area with construction of an  
 20 operable barrier at the Head of Old River. As shown in Figure 24-10, no portion of Alternative 2C is  
 21 located in or near an area designated as a High or Very High Fire Hazard Severity Zone. The  
 22 northernmost and southernmost portions of Alternative 2C would be located are near Moderate Fire  
 23 Hazard Severity Zones.

24 As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, precautions would be  
 25 taken to prevent wildland fires during construction, and operation and maintenance of the water  
 26 conveyance facilities. Specifically, in an effort to reduce the potential for fire hazards, the project  
 27 proponents and/or the contractors would develop and implement an FPCP in coordination with  
 28 federal, state, and local agencies. Development and implementation of the FPCP would help ensure  
 29 that people or structures would not be subject to a significant risk of loss, injury or death involving  
 30 wildland fires. Therefore, this effect would not be adverse.

31 **CEQA Conclusion:** Construction of Alternative 2C would involve the use of ignitable materials  
 32 including, but not limited to, fuels and solvents, which would be used for the operation and  
 33 maintenance of construction vehicles and other equipment. Additionally, the potential exists for  
 34 subsurface infrastructure transporting flammable materials to be disrupted during construction.  
 35 However, because no portion of Alternative 2C would be located near an area zoned as a High or  
 36 Very High Fire Hazard Severity Zone and because standard fire safety and prevention measures, as  
 37 part of a FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); would be implemented,  
 38 this impact would be less than significant. No mitigation is required.

39 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 40 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 41 **Water Conveyance Facilities**

42 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 43 conveyance facilities would be similar to those described for Alternative 1C. This alternative may

1 require the transport, storage, and use of chemicals or hazardous waste materials including fuel,  
2 oils, grease, solvents, and paints. Solids collected at the solids lagoons, and sediment dredged during  
3 periodic maintenance dredging at the intakes and operable barrier at the head of Old River, may  
4 contain hazardous constituents (e.g., persistent pesticides, mercury, PCBs). Differences from  
5 Alternative 1C could result from potential hazards associated with operational and maintenance  
6 activities associated with the operable barrier at the Head of Old River. For example, sediment  
7 removal activities associated with gate maintenance could encounter and release contaminated  
8 sediments. To ensure that potentially contaminated sediment from maintenance dredging activities  
9 at the intakes would not adversely affect soil, groundwater or surface water, a SAP would be  
10 implemented prior to any dredging activities, as described under Impact HAZ-1 for this alternative.  
11 All sediment would be characterized chemically prior to reuse to ensure that reuse of this material  
12 would not result in a hazard to the public or the environment. This facility would require the use of  
13 oils and other hazardous materials.

14 As previously discussed under Impact HAZ-2, Lakewood Drive Park, Sycamore Drive Park, Summer  
15 Lake Park, and Mokelumne High (Continuation) School would be within 0.25 mile of the  
16 construction footprint for Alternative 2C. Should hazardous materials be inadvertently released in  
17 substantially quantities during routine operations and maintenance at the constructed facilities due  
18 to improper handling, there would be a potential risk to the public (including sensitive receptors).  
19 However, because the types of potentially hazardous materials used during routine operation and  
20 maintenance activities would be used in relatively small quantities, and because BMPs, as would be  
21 implemented in the SWPPPs, the SPCCPs, and the HMMPs (as detailed in Appendix 3B,  
22 *Environmental Commitments, AMMs, and CMs*), would be in place to help prevent the inadvertent  
23 release of these materials and to contain and remediate spills should they occur, the risk to sensitive  
24 receptors within 0.25 mile of the construction footprint would be negligible.

25 Improper disposal of potentially contaminated (e.g., persistent pesticides and mercury) lagoon  
26 solids could result in contamination of soil, groundwater and surface water, which would be  
27 considered an adverse effect. With implementation of Mitigation Measure HAZ-6, solids from the  
28 solids lagoons would be sampled and characterized to evaluate disposal options, and disposed of  
29 accordingly at an appropriate, licensed facility to avoid an adverse effect.

30 Delta Air Park, Funny Farm, Byron Airport, and the Borges-Clarksburg Airport would be within 2  
31 miles of the Alternative 2C construction footprint. With the exception of power transmission lines  
32 supplying power to pumps, surge towers, and other equipment used for operation and maintenance,  
33 water conveyance facilities operations and maintenance are not anticipated to require high-profile  
34 equipment, the use of which near an airport could result in an adverse effect on aircraft. Project  
35 proponents would adhere to all applicable FAA regulations (14 CFR Part 77), and would coordinate  
36 with Caltrans' Division of Aeronautics prior to any maintenance activities requiring high-profile  
37 maintenance equipment and comply with any recommendation Caltrans may have to ensure that  
38 there is no conflict with or adverse effect on air traffic. Compliance with these recommendations,  
39 which could include limitations necessary to minimize potential problems, such as the use of  
40 temporary construction equipment, supplemental notice requirements, and marking and lighting  
41 high-profile structures would reduce the potential for impacts on air safety.

42 Implementation of the environmental commitments and Mitigation Measure HAZ-6 would ensure  
43 that operation and maintenance of the water conveyance facilities under Alternative 2C would not  
44 create substantial hazards to the public or the environment through the release of hazardous

1 materials or by other means during operation and maintenance of the water conveyance facilities.  
2 Accordingly, there would be no adverse effect.

3 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
4 operation and maintenance of the water conveyance facilities and the potential interference with air  
5 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
6 could have impacts on the public and environment. However, implementation of the BMPs and other  
7 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
8 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
9 when performing work with high-profile equipment within 2 miles of an airport, which would  
10 include implementation of recommendations to provide supplemental notice and/or equip high-  
11 profile structures with marking and lighting, would ensure that operation and maintenance of the  
12 water conveyance facilities would not create a substantial hazard to the public, environment or air  
13 traffic safety. In addition, improper disposal of potentially contaminated (e.g., persistent pesticides  
14 and mercury) lagoon solids could result in contamination of soil, groundwater and surface water,  
15 which would be considered a significant impact. With implementation of Mitigation Measure HAZ-6,  
16 solids from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
17 disposed of accordingly at an appropriate, licensed facility to avoid a significant impact.

18 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
19 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
20 substantial hazard to the public or the environment and, accordingly, this impact would be less than  
21 significant.

22 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
23 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
24 **CM13, CM14, CM16, CM18 and CM19**

25 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
26 the implementation of CM2–CM11, CM13, CM14, CM16, and CM18 to create hazards to workers, the  
27 public, and the environment would be similar to those described under Alternative 1A. Potential  
28 variation from Alternative 1A would be anticipated to be minor but could result from the selection  
29 of different areas for restoration activities based on the location of the physical water conveyance  
30 features associated with each alternative.

31 Hazardous materials associated with the operation of construction equipment could be released into  
32 the environment in the course of the materials' routine transport, use, or disposal. Releases could  
33 also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
34 known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
35 creating the potential for hazardous materials disturbance and release. Other activities, including  
36 the intentional demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material  
37 and/or RTM, would also present the potential to generate hazards or release hazardous materials.  
38 However, prior to the reuse of spoils, dredged material or RTM, these materials would undergo  
39 chemical characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and*  
40 *CMs*, to ensure that they are not creating a hazard to the public and environment.

41 Further, other potential hazards that could result from implementing conservation measures  
42 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
43 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
44 release of hazardous substances during operation and maintenance and/or transport (e.g.,

1 herbicides for nonnative vegetation control); the release, in the short-term, of pesticides from  
 2 former agricultural lands as a result of wetland and floodplain restoration; the potential for safety  
 3 hazards related to construction in the vicinity of an airport; and the potential for wildfire hazards in  
 4 the vicinity of construction sites.

5 These effects, were they to occur, would be considered adverse. The proposed conservation  
 6 measures would be designed to avoid sensitive receptors and would minimize, to the extent feasible,  
 7 the need to acquire or traverse areas where the presence of hazardous materials is suspected or has  
 8 been verified. With implementation of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, TRANS-  
 9 1a, and environmental commitments (discussed previously for Impacts HAZ-1 through HAZ-6, and  
 10 in detail in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), the potential for substantial  
 11 hazards to the public or environment would be reduced and, accordingly, this effect would not be  
 12 adverse.

13 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
 14 public to hazardous substances or conditions during construction, operation, and maintenance of  
 15 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 16 implementation would involve extensive use of heavy equipment during construction, and/or the  
 17 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 18 for nonnative vegetation control). Hazardous materials could be inadvertently released, exposing  
 19 construction workers or the public to hazards. Construction of restoration projects on or near  
 20 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 21 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 22 in hazards to air traffic. These effects, were they to occur, would result in a significant impact.  
 23 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
 24 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
 25 ensure that these potential impacts would be less than significant.

26 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 27 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 28 **Construction Footprint, and Remediate and/or Contain Contamination**

29 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 30 1A.

31 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 32 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 33 **Dispose of Them in Accordance with Applicable Regulations**

34 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 35 1A.

36 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

37 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 38 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 2           **Minimizes Any Effect on Worker and Public Health and Safety**

3           Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 4           Chapter 20, *Public Services and Utilities*.

5           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 6           **Plan**

7           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 8           1A in Chapter 19, *Transportation*.

9           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 10          **Conservation Measures that Create or Improve Wildlife Habitat**

11          **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 12          wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 13          strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 14          from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 15          areas for restoration activities based on the location of the physical water conveyance features  
 16          associated with each alternative. Such variation may result greater or less opportunity for bird-  
 17          aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 18          because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 19          zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 20          Airport; Sacramento International Airport, and Byron Airport.

21          The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 22          because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 23          would reduce the severity of this effect through the development and implementation of measures  
 24          to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 25          adverse.

26          **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 27          habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 28          flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 29          significant impacts on public safety. The following airports, because they are in relatively close  
 30          proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 31          Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 32          Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 33          through the ultimate development and implementation of measures to reduce, minimize and/or  
 34          avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 35          significant and unavoidable.

36          **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 37          **Regulatory Agencies**

38          Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 39          1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 40          a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 41          extent possible.

### 24.3.3.8 Alternative 3—Dual Conveyance with Pipeline/Tunnel and Intakes 1 and 2 (6,000 cfs; Operational Scenario A)

#### Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the Release of Hazardous Materials or by Other Means during Construction of the Water Conveyance Facilities

**NEPA Effects:** Hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction of the water conveyance facilities for Alternative 3 would be similar to those described under Alternative 1A. Under this alternative, however, only Intakes 1 and 2 would be constructed. Thus, it is anticipated that effects associated with the transport and use of fuels for this alternative would be similar, but less severe, than those described for Alternative 1A.

Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil, sediment or groundwater, hazardous constituents present in RTM, infrastructure containing hazardous materials, and routine transportation of hazardous materials would be similar to those described under Alternative 1A. Because only Intakes 1 and 2 would be built under this alternative, however, implementation would avoid any site-specific contaminants or hazardous materials associated with the construction of Intakes 3, 4, and 5.

As with Alternative 1A, tunnel construction activities would carry the potential to encounter gases that could enter the tunnels and accumulate to flammable or explosive concentrations. The construction contractor would be required to prepare an emergency plan prior to construction of the tunnels (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9, "Emergency Plan and Precautions"). This plan would outline the duties and responsibilities of all employees in the event of a fire, explosion or other emergency. The plan would include maps, evacuation plans, rescue procedures, communication protocol, and check-in/check-out procedures. Copies of the plan would be given to the local fire or designated off-site rescue teams and the Division.

Hazardous constituents associated with RTM are not anticipated; however, the possibility exists for RTM and decanted water to pose a hazard to the construction workers, the public, or the environment. Additionally, stored bulk quantities of hazardous materials that have been released to soils and groundwater could be rereleased during construction, also posing a potential hazard. Water conveyance facilities construction, specifically construction of the intakes, would entail sediment-disturbing activities (e.g., cofferdam installation).

Existing infrastructure, including natural gas and petroleum pipelines and transmission lines (Table 24-3), and oil and gas wells, also have the potential to release hazardous materials, as would the transport of hazardous materials during facility construction, as described under Alternative 1A. The precise location of pipelines within a tunnel section would be identified prior to construction to avoid conflicts with shaft construction and disposal of RTM. Studies would be done prior to construction to identify the minimum allowable distance between existing gas wells and tunnel excavation. Abandoned wells would be tested to confirm that they have been abandoned according to DOGGR well abandonment requirements. Those wells not abandoned according to these requirements would be improved. In addition, to avoid the potential conflicts with shaft construction and disposal areas, the utility and infrastructure relocation would be coordinated with local agencies and owners.

1 Alternative 3 would be anticipated to disrupt approximately 144 permanent structures including an  
2 estimated 3 residential structures; 7 recreational structures; 90 agricultural storage and support  
3 structures and 10 other types of structures (e.g., bridge and other types of infrastructure). These  
4 structures may contain hazardous materials that would require proper handling and disposal, if  
5 demolition is necessary. As described for Impact HAZ-1 under Alternative 1A, Mitigation Measure  
6 HAZ-1b would be implemented by the project proponents to ensure that there are no adverse effects  
7 from hazardous materials related to structure demolition.

8 Further, as described for Alternative 1A under Impact HAZ-1, in general, the transportation of  
9 hazardous materials via trucks, trains and ships poses potential risks associated with the accidental  
10 release of these materials to the environment. Rerouting vehicular traffic carrying hazardous  
11 materials during construction of the water conveyance facilities could increase the risk of accidental  
12 release due to inferior road quality or lack of driver familiarity with the modified routes. Hazardous  
13 materials transportation routes are presented in Figure 24-2 and in Table 24-4. Routes anticipated  
14 to be affected during construction of the water conveyance facilities are described in Chapter 19,  
15 *Transportation*. Barges supporting water conveyance facilities construction may also transport  
16 hazardous materials such as fuels and lubricants or other chemicals. The potential exists for  
17 accidental release of hazardous materials from BDCP-related barges. To avoid effects on the  
18 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
19 (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix 3B, *Environmental*  
20 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
21 materials during transport and transfer. Finally, under this alternative, the proposed conveyance  
22 crosses under the existing BNSF/Amtrak San Joaquin line between Bacon Island and Woodward  
23 Island; however, the effect of this crossing would likely be minimal because the proposed  
24 conveyance would traverse the railroad in a deep bore tunnel (see Chapter 19, *Transportation*).  
25 Further, the UPRR runs proximate to the construction area of the proposed Byron Forebay;  
26 however, construction is unlikely to disrupt rail service because much of this line has not been in  
27 service recently. Mitigation measures would be in place to ensure that there are no adverse effects  
28 on road, rail, or water transportation, and thus the potential for the construction of the water  
29 conveyance facilities to pose risks related to the transportation of hazardous materials would be  
30 minimal. As described in Chapter 19, *Transportation*, under Mitigation Measure TRANS-1a, a site-  
31 specific construction traffic management plan, taking into account hazardous materials  
32 transportation, would be prepared and implemented prior to initiation of construction of water  
33 conveyance. Barges supporting water conveyance facilities construction may also transport  
34 hazardous materials such as fuels and lubricants or other chemicals. The potential exists for  
35 accidental release of hazardous materials from BDCP-related barges. To avoid effects on the  
36 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
37 (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix 3B, *Environmental*  
38 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
39 materials during transport and transfer. Finally, any potential effects on rail traffic and any  
40 hazardous materials transport therein during construction would be reduced with implementation  
41 of Mitigation Measure TRANS-1a, which would include stipulations to coordinate with rail providers  
42 to develop alternative interim transportation modes (e.g., trucks or buses) that could be used to  
43 provide freight and/or passenger service during any longer term railroad closures and daily  
44 construction time windows during which construction would be restricted or rail operations would  
45 need to be suspended for any activity within railroad rights of way. This would minimize the  
46 potential risk of release of hazardous materials being transported via these rails.

1 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would minimize, to  
2 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
3 is suspected or has been verified. Further, environmental commitments would be implemented,  
4 including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical  
5 characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. Together, the  
6 environmental commitments would reduce these potential hazards associated with water  
7 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
8 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
9 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact.  
10 As such, construction of the water conveyance facilities would not create a substantial hazard to the  
11 public or the environment through the routine transport, use, or disposal of hazardous materials or  
12 the upset/accidental release of these materials. Thus, this effect would not be adverse.

13 **CEQA Conclusion:** Similar to Alternative 1A, construction of the water conveyance facilities under  
14 Alternative 3 presents the potential for a direct significant impact on construction personnel, the  
15 public and/or the environment associated with a variety of physical and chemical hazardous  
16 conditions because of the intensity of construction activities at the north Delta intakes, forebays and  
17 conveyance pipelines and tunnels and the hazardous materials that would be needed in these areas  
18 during construction. Potential hazards include the routine use of hazardous materials (as defined by  
19 Title 22 of the California Code of Regulations, Division 4.5); natural gas accumulation in water  
20 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment, and  
21 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
22 electrical transmission lines; and hazardous constituents present in RTM. Under this alternative,  
23 however, only Intakes 1 and 2 would be constructed. Thus, it is anticipated that effects associated  
24 with the transport and use of fuels for this alternative would be similar, but less severe, than those  
25 described for Alternative 1A. Many of these physical and chemical hazardous conditions would  
26 occur in close proximity to the towns of Hood and Courtland during construction of the north Delta  
27 intakes and the intermediate forebay. Additionally, the potential would exist for the construction of  
28 the water conveyance facilities to indirectly result in the release of hazardous materials through the  
29 disruption of existing road, rail, or river hazardous materials transport routes because construction  
30 would occur in the vicinity of three hazardous material transport routes, three railroad corridors,  
31 and waterways with barge traffic and would require construction traffic that could disrupt these  
32 routes. For these reasons, this is considered a significant impact. However, with the implementation  
33 of the previously described environmental commitments (e.g., SWPPPs, HMMPs, SPCCPs, and a  
34 Barge Operations Plan) and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described  
35 in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*),  
36 construction of the water conveyance facilities would not create a substantial hazard to the public or  
37 the environment through the routine transport, use, or disposal of hazardous materials or the  
38 upset/accidental release of these materials. As such, these impacts would be less than significant.

39 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
40 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
41 **Construction Footprint, and Remediate and/or Contain Contamination**

42 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
43 1A.

1           **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 2           **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 3           **Dispose of Them in Accordance with Applicable Regulations**

4           Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 5           1A.

6           **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

7           Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 8           Chapter 20, *Public Services and Utilities*.

9           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 10          **Minimizes Any Effect on Worker and Public Health and Safety**

11          Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 12          Chapter 20, *Public Services and Utilities*.

13          **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 14          **Plan**

15          Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 16          1A in Chapter 19, *Transportation*.

17          **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 18          **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 19          **Facilities**

20          **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
 21          an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
 22          pose a health hazard. However, no schools, parks or hospitals are located within 0.25 mile of  
 23          Alternative 3. Therefore, no sensitive receptors would be exposed to hazardous materials,  
 24          substances, or waste during construction of the water conveyance facilities under Alternative 3. As  
 25          such, there would be no effect. Potential air quality effects on sensitive receptors are discussed in  
 26          Chapter 22, *Air Quality and Greenhouse Gases*.

27          **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
 28          Alternative 3 water conveyance facilities alignment, therefore, there would be no impact due to  
 29          exposure of sensitive receptors to hazardous materials, substances or waste during construction of  
 30          the water conveyance facilities. Accordingly, there would be no impact. No mitigation is required.  
 31          Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
 32          *Greenhouse Gases*.

33          **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 34          **Create a Significant Hazard to the Public or the Environment**

35          **NEPA Effects:** There are no "Cortese List" sites or known SOCs within the construction footprint of  
 36          Alternative 3 (Table 24-5 and Figure 24-4), and therefore there would be no conflict pertaining to a  
 37          known hazardous materials site during construction of the water conveyance facilities, and thus, no  
 38          related hazard to the public or the environment. For those hazardous materials sites identified  
 39          within the 0.5-mile radius but which are not within the construction footprint, there would be no

1 potential for construction of the water conveyance facilities to disturb those sites such that there  
 2 would be a re-release of hazardous materials that would create a hazard for the public or  
 3 environment. As such, there would be no effect. The potential for encountering unknown hazardous  
 4 materials sites during the course of construction is discussed under Impact HAZ-1.

5 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
 6 conveyance facility under this alternative, there would be no conflict with known hazardous  
 7 materials sites during construction of the water conveyance facilities, and therefore, no related  
 8 hazard to the public or the environment. As such, there would be no impact. No mitigation is  
 9 required. The potential for encountering unknown hazardous materials sites during the course of  
 10 construction is discussed under Impact HAZ-1.

11 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 12 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 13 **Study Area during Construction of the Water Conveyance Facilities**

14 **NEPA Effects:** Safety hazards to aircraft posed by high-profile construction equipment, such as  
 15 cranes and pile drivers, or structures (e.g., proposed transmission lines and towers), would be the  
 16 same as those described under Alternative 1A. Because the Borges-Clarksburg, Spezia and Walnut  
 17 Grove Airports (private air facilities) and the Byron Airport (a public air facility) would be located  
 18 within 2 miles of project features within the construction footprint that may require not only the use  
 19 of high-profile (200 feet or taller) construction equipment but also the use of helicopters (stringing  
 20 of a proposed permanent 230-kV transmission line), there could be potential effects on air safety.

21 However, as required, project proponents would inform Caltrans' Division of Aeronautics in writing  
 22 prior to construction and would adhere to any recommendations resulting from Caltrans' site  
 23 investigations, which would ensure that there are no adverse effects on air safety. Further, the  
 24 project proponents would comply with the recommendations of the OE/AAA (for Byron Airport) (14  
 25 CFR Part 77), as described under Impact HAZ-4 under Alternative 1A. These actions would ensure  
 26 that there are no adverse effects on air safety.

27 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 28 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 29 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
 30 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
 31 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
 32 is operated too close to runways. Three private airports (Borges-Clarksburg, Spezia, and Walnut  
 33 Grove Airports) and one public airport (Byron Airport) are located within 2 miles of the  
 34 construction footprint of Alternative 3. Project proponents would coordinate with Caltrans' Division  
 35 of Aeronautics prior to initiating construction and comply with its recommendations based on its  
 36 investigation(s), as well comply with the recommendations of the OE/AAA (for Byron Airport).  
 37 Compliance with these recommendations, which could include limitations necessary to minimize  
 38 potential problems, such as the use of temporary construction equipment, supplemental notice  
 39 requirements, and marking and lighting high-profile structures would reduce the potential for  
 40 impacts on air safety. Accordingly, impacts on air safety would be less than significant. No mitigation  
 41 is required.

42 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 43 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**

1 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 2 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

3 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 4 Alternative 1A. The northernmost and southernmost extent of this conveyance alignment would be  
 5 adjacent to zones of moderate fire hazard severity.

6 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 7 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 8 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire  
 9 safety and prevention. Additionally, the project proponents would implement fire prevention,  
 10 control and safety measures as part of a FPCP) in coordination with federal, state, and local agencies.  
 11 Implementation of these would help ensure that people or structures would not be subject to a  
 12 significant risk of loss, injury or death involving wildland fires. Therefore, this effect would not be  
 13 adverse.

14 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 15 death involving wildland fires during construction or operation and maintenance of the water  
 16 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and  
 17 safety standards; project proponents would implement standard fire safety and prevention  
 18 measures, as part of an FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and  
 19 because the water conveyance facilities would not be located in a High or Very High Fire Hazard  
 20 Severity Zone. Therefore, this impact would be less than significant. No mitigation is required.

21 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 22 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 23 **Water Conveyance Facilities**

24 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 25 conveyance facilities would be similar to those described for Alternative 1A. Under this alternative,  
 26 however, the potential for hazards associated with intake pumping plants and sediment basins  
 27 would be less widespread, as only two intake facilities would be operated and maintained.  
 28 Nonetheless, this alternative may require the transport, storage, and use of chemicals or hazardous  
 29 waste materials including fuel, oils, grease, solvents, and paints. Because the types of potentially  
 30 hazardous materials used during routine operation and maintenance activities would be used in  
 31 relatively small quantities, and because BMPs, as would be implemented in the SWPPPs, HMMPs,  
 32 and SPCCPs (as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, and under  
 33 Impact HAZ-1 for Alternative 1A), would be in place to help prevent the inadvertent release of these  
 34 materials and to contain and remediate spills should they occur, the risk to the public and  
 35 environment would be negligible. These measures would ensure that this effect is not adverse.

36 Potential releases of hazardous materials could result in an adverse effect on workers, the public  
 37 (including sensitive receptors within 0.25 mile of the water conveyance facilities), and the  
 38 environment. There are no sensitive receptors (i.e., schools, hospitals and parks) located within 0.25  
 39 mile of Alternative 3

40 Solids collected at the solids lagoons, and sediment dredged during periodic maintenance dredging  
 41 at the intakes and operable barrier at the head of Old River, may contain hazardous constituents  
 42 (e.g., persistent pesticides, mercury, PCBs). To ensure that potentially contaminated sediment from  
 43 maintenance dredging activities at the intakes would not adversely affect soil, groundwater or

1 surface water, a SAP would be implemented prior to any dredging activities, as described under  
2 Impact HAZ-1 for this alternative. All sediment would be characterized chemically prior to reuse to  
3 ensure that reuse of this material would not result in a hazard to the public or the environment.  
4 Improper disposal of potentially contaminated (e.g., persistent pesticides and mercury) lagoon  
5 solids could result in contamination of soil, groundwater and surface water, which would be  
6 considered an adverse effect. With implementation of Mitigation Measure HAZ-6, solids from the  
7 solids lagoons would be sampled and characterized to evaluate disposal options, and disposed of  
8 accordingly at an appropriate, licensed facility in order to avoid adverse effects on the environment  
9 from potential contamination.

10 Three private airports (The Borges-Clarksburg, Walnut Grove, and Spezia Airports) and one public  
11 airport (Byron Airport) would be within 2 miles of the Alternative 3 construction footprint (Figure  
12 24-9 and Table 24-6). With the exception of power transmission lines and towers supplying power  
13 to pumps, surge towers, and other equipment used for water conveyance facilities operation and  
14 maintenance, water conveyance operations and maintenance are not anticipated to require high-  
15 profile equipment, the use of which near an airport runway could result in an adverse effect on  
16 aircraft. Project proponents would (14 CFR Part 77), including comply with the recommendations of  
17 the OE/AAA (14 CFR Part 77) for Byron Airport, and would coordinate with Caltrans' Division of  
18 Aeronautics prior to any maintenance activities requiring high-profile maintenance equipment to  
19 ensure that there is no conflict with or adverse effect on air traffic. Compliance with these  
20 recommendations, which could include limitations necessary to minimize potential problems, such  
21 as the use of temporary construction equipment, supplemental notice requirements, and marking  
22 and lighting high-profile structures would reduce the potential for impacts on air safety.

23 Therefore, with implementation of BMPs as part of environmental commitments and  
24 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
25 facilities would not create a substantial hazard to the public or the environment and, accordingly,  
26 there would be no adverse effect.

27 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
28 operation and maintenance of the water conveyance facilities and the potential interference with air  
29 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
30 could have impacts on the public and environment. However, implementation of the BMPs and other  
31 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
32 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
33 when performing work with high-profile equipment within 2 miles of an airport, which would  
34 include implementation of recommendations to provide supplemental notice and/or equip high-  
35 profile structures with marking and lighting, would ensure that operation and maintenance of the  
36 water conveyance facilities would not create a substantial hazard to the public, environment or air  
37 traffic safety. Additionally, improper disposal of potentially contaminated (e.g., persistent pesticides  
38 and mercury) lagoon solids could result in contamination of soil, groundwater and surface water,  
39 which would be considered a significant impact. However, with implementation of Mitigation  
40 Measure HAZ-6, solids from the solids lagoons would be sampled and characterized to evaluate  
41 disposal options, and disposed of accordingly at an appropriate, licensed facility to ensure that this  
42 impact would be less than significant.

43 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
44 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
45 substantial hazard to the public or the environment and this impact would be less than significant.

1           **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
2           **and/or Disposal**

3           Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
4           1A.

5           **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
6           **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
7           **CM13, CM14, CM16, CM18 and CM19**

8           **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
9           the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
10          workers, the public, and the environment would be similar to those described under Alternative 1A.  
11          Hazardous materials associated with the operation of construction equipment could be released into  
12          the environment in the course of the materials' routine transport, use, or disposal. Releases could  
13          also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
14          known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
15          creating the potential for their disturbance and release. Other activities, including the intentional  
16          demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM,  
17          would also present the potential to generate hazards or release hazardous materials. However, prior  
18          to the reuse of spoils, dredged material or RTM, these materials would undergo chemical  
19          characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, to  
20          ensure that they are not creating a hazard to the public and environment.

21          Further, other potential hazards that could result from implementing conservation measures  
22          include the possible release of hazardous substances in proximity to sensitive receptors; the  
23          accidental release of hazardous substances during operation and maintenance (e.g., herbicides for  
24          nonnative vegetation control); damage or disruption of existing infrastructure such that hazardous  
25          conditions were created; the release, in the short-term, of pesticides from former agricultural lands  
26          as a result of wetland and floodplain restoration; the potential for safety hazards related to  
27          construction in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of  
28          construction sites.

29          These potential effects, were they to occur, would be considered adverse. However, the proposed  
30          conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
31          extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
32          suspected or has been verified. Additionally, with implementation of Mitigation Measures HAZ-1a,  
33          HAZ-1b, UT-6a, UT-6c, and TRANS-1a, and environmental commitments (discussed previously for  
34          Impacts HAZ-1 through HAZ-6, and in detail in Appendix 3B, *Environmental Commitments, AMMs,*  
35          *and CMs*), the potential for substantial hazards to the public or environment would be reduced and,  
36          accordingly, there would be no adverse effect.

37          Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
38          result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

39          **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
40          public to hazardous substances or conditions during construction, operation, and maintenance of  
41          CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
42          implementation would involve extensive use of heavy equipment during construction, and/or the  
43          use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides

1 for nonnative vegetation control). These chemicals could be inadvertently released, exposing  
 2 construction workers or the public to hazards. Construction of restoration projects on or near  
 3 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 4 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 5 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
 6 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
 7 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
 8 ensure that these potential impacts would be less than significant.

9 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 10 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 11 **Construction Footprint, and Remediate and/or Contain Contamination**

12 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 13 1A.

14 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 15 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 16 **Dispose of Them in Accordance with Applicable Regulations**

17 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 18 1A.

19 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

20 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 21 Chapter 20, *Public Services and Utilities*.

22 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 23 **Minimizes Any Effect on Worker and Public Health and Safety**

24 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 25 Chapter 20, *Public Services and Utilities*.

26 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 27 **Plan**

28 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 29 1A in Chapter 19, *Transportation*.

30 **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 31 **Conservation Measures that Create or Improve Wildlife Habitat**

32 **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 33 wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 34 strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 35 from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 36 areas for restoration activities based on the location of the physical water conveyance features  
 37 associated with each alternative. Such variation may result greater or less opportunity for bird-  
 38 aircraft strikes depending on the location's proximity to airport flight zones. The following airports,  
 39 because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation

1 zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
2 Airport; Sacramento International Airport, and Byron Airport.

3 The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
4 because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
5 would reduce the severity of this effect through the development and implementation of measures  
6 to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
7 adverse.

8 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
9 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
10 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
11 significant impacts on public safety. The following airports, because they are in relatively close  
12 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
13 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
14 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
15 through the ultimate development and implementation of measures to reduce, minimize and/or  
16 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
17 significant and unavoidable.

18 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
19 **Regulatory Agencies**

20 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
21 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
22 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
23 extent possible.

24 **24.3.3.9 Alternative 4—Dual Conveyance with Modified Pipeline/Tunnel**  
25 **and Intakes 2, 3, and 5 (9,000 cfs; Operational Scenario H)**

26 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
27 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
28 **Conveyance Facilities**

29 **NEPA Effects:**

30 **Routine Use of Hazardous Materials**

31 As described in Chapter 3, *Description of Alternatives*, during construction of Alternative 4, six  
32 locations would be designated as fuel stations. All fuel stations would be located adjacent to a  
33 concrete batch plant; both the fuel station and the batch plant would be temporary and would only  
34 be in place for the duration of construction. Each fuel station would occupy 1 acre. The fuel stations  
35 would be established in currently rural areas. There would be one fuel station at each of the three  
36 intakes—one would be located within the intake work area for Intake 2, just east of SR 160 across  
37 the Sacramento River from Clarksburg; one would be located within the intake work area for Intake  
38 3, just north of Hood; and one would be located within the intake work area for Intake 5,  
39 approximately 2 miles northeast of Courtland. In addition, one fuel station would be located within  
40 an RTM storage area east of I-5, approximately 4 miles east of Vorden. The southernmost fuel  
41 station would be located at the northeast corner of the expanded Clifton Court Forebay. Fuel station

1 locations are shown in Figure 24-7 and in Figure M3-4 in the Mapbook Volume. It is anticipated that  
2 equipment and vehicles would be maintained in the field and at on-site maintenance facilities. Bulk  
3 fuel would be stored at fuel stations and would potentially pose the risk of vehicle fueling spills and  
4 leakage from above-ground storage tanks at fuel stations.

5 In addition to fuel use and bulk fuel storage, oils, lubricants, and other hazardous materials would be  
6 stored onsite and/or used in heavy construction equipment, such as compressors, generators, pile  
7 drivers, cranes, forklifts, excavators, pumps, or soil compactors throughout the study area during  
8 construction of the conveyance facilities. The presence and use of these hazardous materials would  
9 create the potential for accidental spillage and exposure of workers and the public to these  
10 substances. Similarly, fuels, oil, and lubricants would all potentially be used to operate the heavy  
11 equipment necessary for pre-construction geotechnical investigations (i.e., cone penetrometer test  
12 rig and drill rig). Detailed subsurface geotechnical investigations would be performed at several  
13 locations along the water conveyance alignment and associated appurtenant facilities, including  
14 within, and immediately to the north and south of, the town of Hood. The primary exploration  
15 methods would include soil borings and cone penetration tests (conventional piezocones and  
16 seismic cones). Prior to actual drilling and sampling, each planned boring/cone penetration test  
17 location would require field reconnaissance, marking or staking the exploration site, and calling the  
18 Underground Service Alert (USA) for utility clearance. Cuttings and excess drilling fluid would be  
19 contained in drums, large containers, or vacuum truck and disposed of offsite at an appropriate  
20 landfill.

21 Other types of hazardous materials, including paints, solvents, and sealants, would be used in  
22 construction of water conveyance facilities features (e.g., intakes, pumping plants, conveyance  
23 piping). Fuel and transfer of oils, lubricants and other materials would be performed on work barges  
24 and watercraft used for building temporary and permanent in-river facilities, such as intake  
25 structures and potentially the operable barrier at the head of Old River, and could be spilled or  
26 otherwise released to the environment and result in a hazard.

27 Construction equipment maintenance is expected to be performed in the field and in central  
28 maintenance facilities operated by contractors during construction of the water conveyance  
29 facilities. While equipment could be maintained at any work area identified for this alternative, the  
30 highest risk of hazards related to equipment maintenance would be anticipated to occur at those  
31 sites where the duration and intensity of construction activities would be greatest, including at the  
32 intake sites along the east bank of the Sacramento River, at the intermediate forebay on Glannvale  
33 Tract, and at Clifton Court Forebay. Construction equipment maintenance activities would also be  
34 expected to be performed at work areas related to main tunnel construction shaft sites on Byron  
35 Tract; Bouldin Island; Staten Island; Glannvale Tract at the intermediate forebay site; Bacon Island;  
36 and at Clifton Court Forebay. For a map of all permanent facilities and temporary work areas  
37 associated with this alternative, see Figure M3-4 in the Mapbook Volume. Equipment maintenance  
38 activities at these facilities would likely include rebuilding pumps or motors, maintaining equipment  
39 hydraulic systems, minor engine repairs and routine lubrication, and replacing worn parts. Spills  
40 and other accidental releases of degreasers, fuels, oils or lubricants could result in minor, temporary  
41 hazards to workers immediately adjacent to these releases. However, because these chemicals  
42 would be used in small quantities by trained personnel, and because BMPs to minimize the potential  
43 for these types of accidents and to contain and remediate hazardous spills, should they occur, would  
44 be implemented, as set forth in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, it is  
45 unlikely that the general public or the environment would be adversely affected.

1 As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, SWPPPs, HMMPs, and  
 2 SPCCPs would be developed and implemented by the project proponents as part of the construction  
 3 process for Alternative 4.

4 The SPCCPs would minimize effects from spills of oil, oil-containing products, or other hazardous  
 5 chemicals during construction and operation of the project. The plan would be comprehensive in  
 6 that it would address actions used to prevent spills and specify actions that would be taken should  
 7 any spills occur, including emergency notification procedures. BMPs to be implemented as part of  
 8 the SPCCPs include, but would not be limited to the following.

- 9 ● Personnel would be trained in emergency response and spill containment techniques, and  
 10 would also be made aware of the pollution control laws, rules, and regulations applicable to  
 11 their work.
- 12 ● When transferring oil or other hazardous materials from trucks to storage containers, absorbent  
 13 pads, pillows, socks, booms or other spill containment material would be placed under the  
 14 transfer area.
- 15 ● Absorbent pads, pillows, socks, booms, and other spill containment materials would be  
 16 maintained at the hazardous materials storage sites for use in the event of spills.
- 17 ● Contaminated absorbent pads, pillows, socks, booms, and other spill containment materials  
 18 would be placed in leak-proof sealed containers until transport to an appropriate disposal  
 19 facility.
- 20 ● In the event of a spill, personnel would identify and secure the source of the discharge and  
 21 contain the discharge with sorbents, sandbags, or other material from spill kits. In addition,  
 22 regulatory authorities (e.g., National Response Center would be contacted if the spill threatens  
 23 navigable waters of the United States or adjoining shorelines, as well as other response  
 24 personnel).
- 25 ● Equipment used in direct contact with water would be inspected daily to prevent the release of  
 26 oil.
- 27 ● Oil-absorbent booms would be used when equipment is used in or immediately adjacent to  
 28 waters.
- 29 ● All reserve fuel supplies would be stored only within the confines of a designated staging area.
- 30 ● Fuel transfers would take place a minimum distance from exclusion/drainage areas and  
 31 streams, and absorbent pads would be placed under the fuel transfer operation.
- 32 ● Equipment would be refueled only in designated areas.
- 33 ● Staging areas would be designed to contain contaminants such as oil, grease, and fuel products  
 34 so that they do not drain toward receiving waters or storm drain inlets.
- 35 ● All stationary equipment would be positioned over drip pans.

36 The SWPPP objectives would be to: (1) identify pollutant sources associated with construction  
 37 activities and operations that could affect the quality of stormwater; and (2) identify, construct, and  
 38 implement stormwater pollution prevention measures to reduce pollutants in stormwater  
 39 discharges during and after construction. It is anticipated that multiple SWPPPs would be prepared  
 40 for the overall project construction, with a given SWPPP prepared to cover a particular water

1 conveyance component (e.g., intermediate forebay) or groups of components (e.g., intakes).

2 Generally, the SWPPP would include the provisions listed below.

- 3 • A description of potential stormwater pollutants from erosion.
- 4 • A description of the management of dredged sediments and hazardous materials present on site
- 5 during construction (including vehicle and equipment fuels).
- 6 • Details of how the sediment and erosion control practices would comply with state and federal
- 7 water quality regulations.
- 8 • A visual monitoring program and a chemical monitoring program for "non-visible" pollutants if
- 9 the BMPs are breached.

10 BMPs in the SWPPPs would include but not be limited to the following measures.

- 11 • Capture sediment via sedimentation and stormwater detention features.
- 12 • Implement concrete and truck washout facilities and appropriately sized storage, treatment, and
- 13 disposal practices. Clean or replace sanitation facilities (as necessary) and inspect regularly for
- 14 leaks/spills.
- 15 • Cover waste disposal containers during rain events and at the end of every day.
- 16 • Store chemicals in watertight containers.
- 17 • Reclaim or land-apply construction site dewatering discharges to the extent practicable, or use
- 18 for other construction purposes (e.g., dust control).
- 19 • Implement appropriate treatment and disposal of construction site dewatering from
- 20 excavations to prevent discharges to surface waters.
- 21 • Equipment and materials for cleanup of spills shall be available on site.
- 22 • Spills and leaks shall be cleaned up immediately and disposed of properly.
- 23 • Ensure that there are trained spill response personnel available.

24 The HMMPs would provide detailed information on the types of hazardous materials used or stored  
 25 at all sites associated with the water conveyance facilities (e.g., pumping plants, maintenance  
 26 facilities); phone numbers of city, county, state, and federal agencies; primary, secondary, and final  
 27 cleanup procedures; emergency-response procedures in case of a spill; and other applicable  
 28 information. The HMMPs would include measures to minimize the possible environmental impacts  
 29 associated with spills or releases of hazardous materials (e.g., solvents, paints) during routine  
 30 construction and operations and maintenance activities. These measures would include but not be  
 31 limited to those listed here (see Appendix 3B, *Environmental Commitments, AMMs, and CMs*, for  
 32 additional detail).

- 33 • Fuel, oil, and other petroleum products will be stored only at designated sites.
- 34 • Hazardous materials containment containers will be clearly labeled with the material's identity,
- 35 handling and safety instructions, and emergency contact information.
- 36 • Storage and transfer of hazardous materials will not be allowed within 100 feet of streams or
- 37 sites known to contain sensitive biological resources except with the permission of Department
- 38 of Fish and Wildlife.
- 39 • The accumulation and temporary storage of hazardous wastes will not exceed 90 days.

- 1       • Soils contaminated by spills or cleaning wastes will be contained and removed to an approved  
2 disposal site.
- 3       • Hazardous waste generated at work sites, such as contaminated soil, will be segregated from  
4 other construction spoils and properly handled, hauled, and disposed of at an approved disposal  
5 facility by a licensed hazardous waste hauler in accordance with regulations. Project proponents  
6 will obtain permits required for such disposal.
- 7       • Emergency spill containment and cleanup kits will be located at the facility site. The contents of  
8 the kit will be appropriate to the type and quantities of chemical or goods stored at the facility.

9       Development and implementation of these plans would reduce the potential risk of a release of  
10 stored fuels, oils, lubricants or other hazardous materials used during construction and construction  
11 equipment operation and maintenance, and would ensure that spills are contained and remediated  
12 promptly and completely.

### 13       **Natural Gas Accumulation in Water Conveyance Tunnels**

14       Under Alternative 4, deep water conveyance tunnels would be constructed. Tunnel 1a, a 28-foot  
15 (inside diameter [ID]) single-bore tunnel, would connect Intake 2 to Intake 3. From Intake 3, a 40-  
16 foot (ID) tunnel would run south under the town of Hood to the intermediate forebay on Glannvale  
17 Tract. Tunnel 1b, a 28-foot (ID) single-bore tunnel would run southeast from Intake 5 to the  
18 intermediate forebay. Tunnel 2, a 40-foot (ID) dual-bore tunnel, would run south from the  
19 intermediate forebay to two 4,500 cfs pumping plants and to the proposed expanded Clifton Court  
20 Forebay. For a map of the proposed tunnel alignment, see Figure M3-4 in the Mapbook Volume.

21       During construction, there would be the potential to encounter gases that could enter and  
22 accumulate to flammable or explosive concentrations in tunnel bores or other excavations. Were  
23 this to occur, it would be considered an adverse effect. These gases could include methane generated  
24 by peat and organic soils or other natural gases, which could seep from deep natural gas reservoirs  
25 either through improperly sealed boreholes or natural conduits such as faults and fractures. The  
26 thickness of peat and organic soils increases to the west across the Delta, and more than 5,000 oil  
27 and gas wells are located throughout the Delta. There are no active and 15 inactive oil or gas wells  
28 present within the construction footprint of the proposed Alternative 4 water conveyance  
29 alignment; oil and gas wells along the water conveyance facilities alignments are shown in Figure  
30 24-5. Gas fields in the United States are typically located at depths greater than 3,000 feet (U.S.  
31 Energy Information Administration 2012). Because the tunnels would be approximately 150 to 160  
32 feet below ground, it is unlikely that a gas field would be encountered during tunneling. However, an  
33 evaluation of how these gas fields could affect the constructability of the tunnels would be prepared  
34 during the geotechnical investigations performed in the design phase of the water conveyance  
35 facilities. For water conveyance facilities construction under Alternative 4, the water conveyance  
36 tunnels may receive a Cal-OSHA classification of “gassy or extrahazardous” due to the presence of  
37 natural gas wells along the alignment. If the tunnels receive a “gassy or extrahazardous”  
38 classification, specialized tunneling equipment, which would need to be approved by the MSHA,  
39 would be required to prevent explosions during tunneling, as would gas detection equipment on the  
40 tunnel boring machines, an automatic shutoff of the equipment if gas were detected, and fireproof  
41 construction equipment. In addition, the contractor would be required to follow gas monitoring and  
42 fire prevention requirements mandated by Cal-OSHA based on the tunnel gas classification in  
43 accordance with The Tunnel Safety Orders set forth in the California Code of Regulations (Title 8,  
44 Division 1, Chapter 4, Subchapter 20, Article 8, “Tunnel Classifications” [see Section 24.2.2.13,

1 *California Occupational Safety and Health Act*). The tunnel ventilation system would include steel  
2 ducts capable of reversing the direction of air in order to help control potential fires in the tunnel.  
3 Tunnels would be ventilated according to Cal-OSHA requirements. Cal-OSHA requires providing at  
4 least 200 fpm of fresh air per person working underground. Additionally, a minimum air velocity of  
5 60 fpm is required to dilute any contaminated gas present within the tunnel. Further, ventilation  
6 hardware would comply with Cal-OSHA requirements. The hardware would include steel ducts and  
7 be capable of reversing the direction of air flow (for fire control within the tunnel). Adherence to  
8 these regulations would reduce the potential for hazards related to the accumulation of natural gas  
9 in tunnels. Further, the construction contractor would be required to prepare an emergency plan  
10 prior to construction of the tunnels (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9,  
11 “Emergency Plan and Precautions”). This plan would outline the duties and responsibilities of all  
12 employees in the event of a fire, explosion or other emergency. The plan would include maps,  
13 evacuation plans, rescue procedures, communication protocol, and check-in/check-out procedures.  
14 Copies of the plan would be given to the local fire or designated off-site rescue teams and the  
15 Division.

### 16 **Existing Contaminants in Soil, Groundwater, or Sediment**

17 There may be contaminated areas within the study area that have not been previously identified  
18 because of inadequate or missing data, or poor record keeping. During construction of Alternative 4,  
19 contaminated soils, sediments and groundwater may be encountered where historical releases have  
20 occurred, such as at former storage and distribution facility locations.

21 The lateral and vertical extent of any historical soil-, sediment-, or water-based contamination  
22 within or near the construction footprint is unknown. Although soil contamination, where it exists,  
23 is, in general, likely to be highly localized, groundwater contamination could have migrated  
24 substantial distances and therefore be more widespread than soil contamination—exceptions to this  
25 would include potential lead contamination of soils along SR 160 sections where realignment would  
26 occur (see Chapter 3, *Description of Alternatives*, for a description of SR 160 realignment and  
27 Appendix 24B, *2010 Initial Site Assessment*, for a description of potential lead contamination in  
28 proximity to SR 160). Where realignment of SR 160 would occur, and Aerially Deposited Lead (ADL)  
29 site investigation would be required to determine if hazardous soils exist and what actions, if any,  
30 would be required prior to and/or during construction. In addition, as described in the 2010 ISA,  
31 hazardous levels of lead and chromium are known to exist in the yellow paint of the traffic stripes on  
32 SR 160, which would be ground off where road realignment would occur under this alternative.  
33 These grindings, which would consist of the roadway material and painted traffic stripes, would be  
34 removed and disposed of in accordance with Caltrans Standard Special Provision 15-305 (Residue  
35 Containing High Lead Concentration Paints); Caltrans Standard Special Provision 15-305 requires a  
36 Lead Compliance Plan. Further, the 2010 ISA noted that hazardous chemicals exist in the wood posts  
37 associated with the metal beam guard railings along SR 160 sections where realignment would  
38 occur. As such, if these wood posts are removed, they would be disposed of in accordance with  
39 Caltrans Standard Special Provision 14-010 (Treated Wood Waste). Additionally, because the  
40 proposed project would disturb soils in the immediate proximity of SR 160 where the realignments  
41 would be required, Caltrans would require a site investigation, which may include soil sampling, and  
42 site investigation report for Caltrans review and approval. Project proponents would adhere to  
43 Caltrans’ recommendations in order to avoid any adverse effects on the environment related to lead  
44 contamination at SR 160 realignment sites.

1 Locations of known oil and gas processing facilities (Figure 24-1) are considered a separate category  
2 of SOC due to the potential for spills and leaks at these locations. The lateral and vertical extent of  
3 any existing contamination that may be present at these sites is unknown. The number of SOCs may  
4 change during right-of-way evaluation, land acquisition, and preconstruction site-clearance  
5 investigations or during construction. Additional SOCs may be identified during these activities, and  
6 currently identified SOCs may be determined innocuous after site-specific field investigation and  
7 testing.

8 It is likely that contaminated sediments (e.g., persistent pesticide- and mercury-contaminated  
9 sediments) would be resuspended during sediment-disturbing activities related to in-river  
10 construction (e.g., cofferdam construction at intake sites, operable barrier) and dredging of Clifton  
11 Court Forebay for the proposed expansion. Because only Intakes 2, 3, and 5 would be built under  
12 this alternative, implementation would avoid any site-specific contaminants or hazardous materials  
13 associated with the construction of Intakes 1 and 4. Additionally, water conveyance facilities  
14 construction would require in-channel dredging (e.g., for construction of the operable barrier at the  
15 head of Old River), which would result in the temporary resuspension of potentially contaminated  
16 sediments. Additionally, stored bulk quantities of hazardous materials that have been released to  
17 soils and groundwater could be rereleased during construction, also posing a potential hazard.

18 Concentrations of potential contaminants in Clifton Court Forebay sediment and in the sediment  
19 where in-river construction activities would be taking place are not known; therefore, the associated  
20 risk cannot be identified. In general, sediment-bound pesticide concentrations in rivers and  
21 estuaries vary by season (with rain and the seasonal variation in pesticide applications) and are  
22 episodic; pesticide concentrations in sediment are generally higher during rainy season at the onset  
23 of winter rains (Bergamaschi et al. 2007). One study suggests that the mercury concentration in  
24 suspended sediment at Freeport, just upstream of the intake locations, is less than 10 ng/l, below  
25 the recommended criterion of 50 ng/l (Domagalski 2001). Also, mobilization of potentially  
26 contaminated sediments would be directly related to levels of turbidity and suspended sediments  
27 resulting from construction activities. Although resulting turbidity has not been modeled, it is  
28 anticipated to be low given the permit requirements for controls stipulating that dredging activities  
29 be conducted and monitored such that turbidity not increase in receiving waters, measured 300 feet  
30 downstream; or that silt curtains be used to control turbidity and reduce the associated mobilization  
31 of potentially contaminated sediments.

32 Mobilization of potentially contaminated sediments is unlikely to be a hazard concern for  
33 construction workers because it is not expected that workers would be in direct contact with  
34 sediment. Similarly, resuspension of potentially contaminated sediment is unlikely to pose a hazard  
35 to the general public or the environment because it would be confined to a relatively small area  
36 during construction and would be temporary (e.g., occurring during in-river work and potentially  
37 for a few hours following cessation of in-river construction activities). Further, as described in  
38 Appendix 3B, *Environmental Commitments, AMMs, and CMs*, for any project dredging activity, the  
39 project proponents would prepare and implement a pre-dredge sampling and analysis plan (SAP),  
40 which would be developed and submitted by the contractors required per standard DWR contract  
41 specifications Section 01570. As part of the SAP, prior to any dredging activities, sediment would be  
42 evaluated for contaminants that may impact water quality from the following discharge routes from  
43 the following discharge routes.

- 44 • In-stream discharges during dredging.

- 1 • Direct exposure to contaminants in the material through ingestion, inhalation or dermal  
2 exposure.
- 3 • Effluent (return flow) discharge from an upland disposal site.
- 4 • Leachate from upland dredge material disposal that may affect groundwater or surface water.

5 Additionally, BMPs, including those listed below, would be implemented during in-river  
6 construction activities to ensure that disturbed sediment was contained, thus reducing the risk of  
7 sediment dispersal away from the immediate area (see Appendix 3B, *Environmental Commitments,*  
8 *AMMs, and CMs*).

- 9 • Conduct dredging activities in a manner that will not cause turbidity increases in the receiving  
10 water, as measured in surface waters 300 feet down-current from the project, to exceed the  
11 Basin Plan objectives beyond an averaging period approved by the RWQCB and Department of  
12 Fish and Wildlife.
- 13 • If turbid conditions generated during dredging exceed the agreed-upon implementation  
14 requirements for compliance with the Basin Plan objectives, silt curtains will be utilized to  
15 control turbidity.
- 16 • Conduct in-river construction activities during low-flow periods to the extent practicable.

17 To the extent feasible, action alternative design would minimize the need to acquire or traverse  
18 areas where the presence of hazardous materials is suspected or has been verified. In addition,  
19 under Mitigation Measure HAZ-1a, remediation and/or containment prior to discharge or disposal  
20 of contaminated soil and groundwater, as identified in preconstruction surveys, would be performed  
21 prior to construction of the proposed water conveyance facilities at known contaminated sites or in  
22 areas where contamination is suspected.

### 23 **Constituents in Reusable Tunnel Material**

24 RTM would consist of materials excavated from the tunnel bore, which would be advanced at a  
25 depth of approximately 100 feet bgs and 160 feet bgs under Delta water channels. As described in  
26 Section 24.3.1.3, *Construction Effects*, soil conditioners would be added during tunneling activities to  
27 facilitate the process, and RTM would be transported from the tunnel through the launching shaft to  
28 the surface and then by conveyor belt to RTM areas. At the RTM areas, decant liquids from the RTM  
29 would be leached, collected and evaporated. RTM areas would be located just southeast of Scribner  
30 Road adjacent to Intake 2; just south of Lambert Road in Elk Grove, approximately 1.5 miles west of  
31 I-5; just north of Dierrsen Road in Elk Grove; west of the proposed intermediate forebay adjacent to  
32 the Sacramento River; east of the proposed intermediate forebay both north and south of Twin  
33 Cities Road; on southeastern Bouldin Island; and northwest of Clifton Court Forebay on Byron Tract.  
34 For a map of proposed RTM areas, see Figure M3-4 in the Mapbook Volume.

35 As described in Chapter 9, *Geology and Seismicity*, the geologic materials encountered during  
36 tunneling are expected to comprise alluvial sediments consisting of a mixture of clay, silt, sand,  
37 gravel and minor amounts of organic matter, all deposited prior to the arrival of settlers to  
38 California and subsequent mining, agricultural and urban land uses that have produced potential  
39 contaminants of concern, as discussed above.

40 It is anticipated that all tunnel boring additives would be non-toxic and biodegradable. Regardless,  
41 before the RTM could be re-used or returned to the environment, it would be managed to comply

1 with NPDES permit requirements, and at a minimum would go through a drying/water-solids  
2 separation process and a possible physical or chemical treatment following chemical  
3 characterization (including RTM decant liquid). Depending on the composition of the RTM and type  
4 of conditioning agents used, there would be many options for management of the RTM. Management  
5 could be done in several ways, including chemical flocculation, settlement/sedimentation, handling  
6 at a treatment plant, chemical conditioning or controlled storage. The method of controlled storage  
7 (described in Appendix 3C, *Construction Assumptions for Water Conveyance Facilities*), similar to  
8 landfill storage, would be the method with the broadest impacts because a designated area large  
9 enough to store the RTM may be required permanently. If controlled storage is necessary, the RTM  
10 would be deposited within designated RTM storage areas. To ensure that the RTM is contained  
11 within the designated area, a retaining dike would be built around the perimeter of the RTM area.  
12 RTM ponds would aid in RTM management and facilitate the dewatering. Several of the ponds would  
13 be designated as leachate ponds. The leachate would be pumped from the drainage system to the  
14 leachate ponds for possible additional treatment. To ensure that underlying groundwater is not  
15 contaminated, the invert of the RTM pond would be a minimum of 5 feet above the seasonal high  
16 groundwater table, and an impervious liner would be placed on the invert of the RTM pond and  
17 along the interior slopes of the berms to prevent any contact between the RTM and the  
18 groundwater, as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*. Further, as  
19 part of the project, RTM would be tested in accordance with the methods outlined in EPA  
20 publication SW-846, as required by state and federal regulations prior to reuse (e.g., RTM in levee  
21 reinforcement) or disposal. RTM decant liquid would also require testing prior to discharge to meet  
22 NPDES or Construction General Permit (Order 2010-0014-DWQ) requirements. As described in  
23 Section 24.3.1.3, *Construction Effects*, preliminary lab tests indicate that RTM could potentially be  
24 reused to strengthen select Delta levees, for habitat restoration, fill on subsiding islands, or as  
25 structural fill for construction of the proposed water conveyance facilities (URS 2014).

26 Should constituents in RTM or associated decant liquid exceed discharge limits, these tunneling  
27 byproducts would be treated to comply with permit requirements. Decant liquids from RTM may  
28 require additional chemical or physical treatment, such as flocculent addition to precipitate  
29 suspended sediment, prior to discharging to surface water.

30 As part of a Material Reuse Plan, prior to construction, draining, and chemical characterization of  
31 RTM, the project proponents would identify sites for reusing this material to the greatest extent  
32 feasible, in connection with project construction activities, habitat restoration activities, as well as  
33 for potential beneficial uses associated with flood protection and management of groundwater  
34 levels within the Plan Area. The BCP proponent would undertake a thorough investigation to  
35 identify sites for the appropriate reuse of RTM, and would consult relevant parties, such as  
36 landowners, reclamation districts, flood protection agencies, state agencies with jurisdiction in the  
37 Delta, and counties, in developing site-specific material reuse plans, as described in Appendix 3B,  
38 *Environmental Commitments, AMMs, and CMs*. Following removal of RTM from the temporary RTM  
39 areas, stockpiled topsoil would be reapplied, and disturbed areas would be returned, to the extent  
40 feasible, to preconstruction conditions. In some instances it may be infeasible to transport and reuse  
41 RTM due to factors such as distance and cost, and/or any environmental effects associated with  
42 transport (e.g., unacceptable levels of diesel emissions). In such instances, RTM sites would be  
43 evaluated for the potential to reapply topsoil over the RTM and to continue or recommence  
44 agricultural activities. If, in consultation with landowners and any other interested parties, project  
45 proponents determine that continued use of the land for agricultural or habitat purposes would be  
46 infeasible, the potential for other productive uses of the land would be examined, as described in

1 Appendix 3B, *Environmental Commitments, AMMs, and CMs*. Under Alternative 4, the dual-bore  
2 tunnel conveyance between the intermediate forebay, surge shafts and two 4,500 cfs pumping  
3 plants leading to the expanded Clifton Court Forebay would be larger than under other  
4 pipeline/tunnel alternatives. Each bore would have an internal diameter of 40 feet and an external  
5 diameter of 44 feet, and the distance between the two bores would increase. Consequently, the  
6 amount of RTM would be greater than the other pipeline/tunnel alternatives. There would be  
7 approximately 27 million cubic yards of RTM generated during construction of Alternative 4.  
8 Although additional footprints for RTM are not anticipated, the larger amount of RTM produced  
9 relative to the other pipeline/tunnel alternatives could correspondingly increase the hazards  
10 associated with disturbing and handling it. RTM management practices and environmental  
11 commitments would minimize the potential hazards from RTM.

## 12 **Electrical Transmission Lines**

13 There are 12 overhead power/electrical transmission lines crossing the proposed Alternative 4  
14 water conveyance facilities alignment (Table 24-3 and Figure 24-6). Disturbance of this  
15 infrastructure during construction activities that employ high-profile equipment, such as cranes,  
16 could result in safety hazards for construction workers in the immediate vicinity of an energized  
17 line. The most significant risk of injury from any power line is the danger of electrical contact  
18 between an object on the ground and an energized conductor. Generally, there is less risk of contact  
19 with higher voltage lines as opposed to low-voltage lines because of the height of the conductors.  
20 When work is performed near transmission lines, electrical contact can occur even if direct physical  
21 contact is not made, because electricity can arc across an air gap. The project proponents would be  
22 required to comply with Title 8 CCR, Section 2300 (“Low Voltage Electrical Safety Orders”) and  
23 Section 2700 (“High Voltage Electrical Safety Orders”) so that worker and public safety is ensured  
24 during work on or in immediate proximity to low- and high-voltage transmission lines. Other  
25 hazards associated with electrical transmission lines include potential health risks exposure to  
26 EMFs. These potential effects are described and assessed in Chapter 25, *Public Health*.

27 Alternative 4 would include the construction of a “split” transmission line system that would  
28 connect to the existing grid in two different locations. The northern point of interconnection would  
29 be located north of Lambert Road and west of Highway 99. From here, a 230-kV transmission line  
30 would run west along Lambert Road, where one segment would run south to the intermediate  
31 forebay, and one segment would run north to connect to a substation, where temporary 69-kV lines  
32 would connect to substations at each of the three intakes. At the southern end of the alignment for  
33 Alternative 4, the point of interconnection may be located in one of two possible locations: southeast  
34 of Brentwood or adjacent to the Jones pumping plant. A 230-kV transmission line would run from  
35 one of these locations to a tunnel shaft northeast of Clifton Court Forebay, and would continue  
36 north, following tunnel shaft locations to Bouldin Island. Because the power required during  
37 operation of the water conveyance facilities would be much less than that required during  
38 construction, and because it would largely be limited to the pumping plants and intermediate  
39 forebay, the “split” system would enable all of the power lines extending from the southern point of  
40 interconnection to be temporary, limited to the construction schedule for the relevant tunnel  
41 reaches and features associated with Clifton Court Forebay. In addition to construction of a “split”  
42 transmission line system, an existing 230-kV and 500-kV transmission line, which run parallel south  
43 of Clifton Court Forebay, would be relocated to an area further south/southeast within 0.5 mile of  
44 their original location. Erecting/relocating power poles would not involve extensive excavation or  
45 material transport, and each pole would occupy a small footprint. Accordingly, the transmission

1 lines (temporary and permanent) would not create an adverse effect related to the release of  
2 hazardous materials.

### 3 **Infrastructure Containing Hazardous Materials**

4 Infrastructure in the study area containing hazardous materials (e.g., natural gas pipelines) could  
5 pose hazards to the environment and the public if disturbed by construction activities or  
6 geotechnical investigations. As described in Section 24.1.2, *Potential Hazardous Materials in the*  
7 *Study Area*, pipelines carrying fluids with hazardous characteristics (e.g., petroleum products) cross  
8 the Alternative 4 conveyance alignment and construction footprint (Figure 24-3). The number of  
9 regional pipeline crossings within the construction disturbance footprint of the all conveyance  
10 alternatives is provided in Table 24-3. Natural gas pipelines cross the conveyance alignment near  
11 Intake 2 at a proposed borrow/spoils area, within the construction footprint of the proposed  
12 east/west transmission line east of Courtland, on Staten Island within the proposed tunnel footprint  
13 between a safe haven area and a RTM area, and near a main tunnel construction shaft on Bacon  
14 Island. Other product pipelines cross the alignment on the northern part of Woodward Island and  
15 along the southwestern side of the proposed Clifton Court Forebay expansion and nearby RTM area.  
16 Further, hazardous materials storage vessels, such as tanks or other bulk containers used for  
17 processing, storage and distribution of fuels, pesticides or other hazardous materials may be present  
18 in the Alternative 4 water conveyance facilities construction footprint. Active and inactive oil wells  
19 are present throughout the Delta and their locations are shown in Figure 24-5.

20 In addition, certain residential, agricultural and commercial structures within the Alternative 4  
21 water conveyance facilities footprint would need to be removed. Under Alternative 4, approximately  
22 85 existing structures are within the construction footprint, including an estimated 19 residential  
23 structures. Other existing structures within the construction footprint would consist primarily of  
24 storage or agricultural support facilities (50); recreational structures (7); and other types of  
25 structures (e.g., power/utility structures and other types of infrastructure). These structures may  
26 contain hazardous materials such as asbestos or lead-based paint, stored liquid paints and solvents,  
27 and household or industrial-strength maintenance chemicals and cleaners. Asbestos-containing  
28 material is regulated both as a hazardous air pollutant under the Clean Air Act (Chapter 22, *Air*  
29 *Quality and Greenhouse Gases*) and as a potential worker safety hazard by Cal-OSHA (see Section  
30 24.2.2.13, *California Occupational Safety and Health Act*). Were these types of hazardous materials to  
31 be encountered during structure demolition, the potential for their release and the consequent  
32 adverse effects on the public, construction workers, and the environment would exist. To prevent  
33 adverse effects, project proponents would implement Mitigation Measure HAZ-1b, which would  
34 require that project proponents coordinate with property owners to identify existing potentially  
35 hazardous infrastructure and infrastructure containing potentially hazardous materials, and that  
36 project proponents perform pre-demolition surveys to identify and characterize hazardous  
37 materials to ensure the safe and appropriate handling and disposal of these materials. Direct  
38 impacts on buildings would be avoided during geotechnical exploration activities.

39 There are 6 natural gas pipelines, 3 petroleum product pipelines, and 11 known inactive and no  
40 active oil or gas wells within the construction footprint for the proposed Alternative 4 water  
41 conveyance alignment (Table 24-3, and Figures 24-3 and 24-5). In addition to the regional pipelines  
42 in the study area, there are networks of minor oil and gas gathering pipelines, which connect  
43 individual oil or gas wells to small storage and preliminary processing facilities operated by the  
44 different oil and gas companies working in the study area. Disturbance of this infrastructure during  
45 construction of the water conveyance facilities could result in hazards to the environment as well as

1 physical and chemical hazards to the construction workers or the nearby public due to fires,  
2 explosions, and release of natural gas or petroleum products. The potential for disturbing oil and gas  
3 fields during geotechnical investigations, excavation or tunneling activities is minimal because these  
4 fields are typically located at depths greater than 3,000 feet (U.S. Energy Information Administration  
5 2012). Effects would be more likely to occur if utilities were not carefully surveyed prior to  
6 construction, including contacting the local utility service providers (e.g., contacting USA). California  
7 Government Code Sections 4216–4216.9 require that anyone planning to excavate contact the  
8 appropriate regional notification center at least 2 working days (but not more than 14 calendar  
9 days) before beginning to excavate. The precise location of pipelines within a tunnel section would  
10 be identified prior to construction to avoid conflicts with shaft construction and disposal of RTM.  
11 Studies would be done prior to construction to identify the minimum allowable distance between  
12 existing gas wells and tunnel excavation. Abandoned wells would be tested to confirm that they have  
13 been abandoned according to DOGGR well abandonment requirements. Those wells not abandoned  
14 according to these requirements would be improved. In addition, to avoid the potential conflicts  
15 with shaft construction and disposal areas, the utility and infrastructure relocation would be  
16 coordinated with local agencies and owners. Implementation of pre-construction surveys, and utility  
17 avoidance or relocation, if necessary, would minimize any potential disruption and hazardous  
18 effects due to disruption. Mitigation Measures UT-6a: Verify locations of utility infrastructure, and  
19 UT-6c: Relocate utility infrastructure in a way that avoids or minimizes any effect on worker and  
20 public health and safety (described in Chapter 20, *Public Services and Utilities*) address these effects.

### 21 **Routine Transport of Hazardous Materials via Trucks, Trains, and Ships**

22 Generally, the transportation of hazardous materials via trucks, trains and ships poses potential  
23 risks associated with the accidental release of these materials to the environment. Alternative 4  
24 would require a heavy volume of materials to be hauled to the construction work areas, increasing  
25 the amount of trucks using the transportation system in the study area. Rerouting vehicular traffic  
26 carrying hazardous materials during construction of the water conveyance facilities could increase  
27 the risk of accidental release due to inferior road quality or lack of driver familiarity with the  
28 modified routes. This includes the risk of release of hazardous products or wastes being transported  
29 routinely or specifically for construction of the water conveyance facilities, and the corresponding  
30 risk of release of fuels (gasoline and diesel) from vehicular accidents. Hazardous materials  
31 transportation routes are presented in Figure 24-2 and in Table 24-4. Three designated hazardous  
32 materials transportation routes cross the Alternative 4 alignment—State Highways 4 and 12, and  
33 Byron Highway (Figure 24-2 and in Table 24-4). It is anticipated that traffic on Byron Highway  
34 would need to be temporarily rerouted during construction of the siphon at the southwest end of  
35 the proposed expanded Clifton Court Forebay. Other routes anticipated to be affected during  
36 construction of the water conveyance facilities under this alternative are described in Chapter 19,  
37 *Transportation*. As described in Chapter 19, *Transportation*, under Mitigation Measure TRANS-1a, a  
38 site-specific construction traffic management plan, taking into account land (including rail) and  
39 marine hazardous materials transportation, would be prepared and implemented prior to initiating  
40 water conveyance facilities construction. Mitigation Measure TRANS-1a includes stipulations to  
41 avoid or reduce potential circulation effects, such as such as providing signage (including signs  
42 warning of roadway surface conditions such as loose gravel), temporary traffic signals/signage to  
43 slow or detour traffic, barricades, and flag people around construction work zones; notifying the  
44 public, including schools and emergency service providers of construction activities that could affect  
45 transportation; providing alternate access routes, if necessary, to maintain continual circulation in  
46 and around construction zones; and requiring direct haulers to pull over in the event of an

1 emergency. Many of these traffic management BMPs (e.g., warning signage and temporary traffic  
2 signals) are roadway safety measures which would indirectly minimize the potential for accidents  
3 involving vehicles transporting hazardous materials routinely or specifically for construction of the  
4 water conveyance facilities, and the corresponding risk of release of fuels (gasoline and diesel) from  
5 vehicular accidents.

6 As described in Chapter 19, *Transportation*, shipping routes to ports in West Sacramento and  
7 Stockton are unlikely to be affected by barge traffic transporting equipment and materials for water  
8 conveyance facilities construction. However, barges supporting water conveyance facilities  
9 construction may also transport hazardous materials such as fuels, lubricants, or other chemicals.  
10 The potential exists for accidental release of hazardous materials from project-related barges. To  
11 avoid effects on the environment related to this issue, BMPs implemented as part of a Barge  
12 Operations Plan (for detail see Appendix 3B, *Environmental Commitments, AMMs, and CMs*),  
13 including the following, would avoid and/or minimize this potential adverse effect:

- 14 • All tugboats operating at the intake construction sites and the barge landings will keep an oil  
15 spill containment kit and spill prevention and response plan on-board.
- 16 • In the event of a fuel spill, report immediately to the California Department of Fish and Wildlife  
17 Office of Spills Prevention and Response: 800-852-7550 or 800-OILS-911 (800-645-7911).
- 18 • When transporting loose materials (e.g., sand, aggregate), barges will use deck walls or other  
19 features to prevent loose materials from blowing or washing off of the deck.

20 Finally, under this alternative, the proposed conveyance crosses under the existing BNSF/Amtrak  
21 San Joaquin line between Bacon Island and Woodward Island. Maintaining freight and passenger  
22 service on the BNSF line is included in the project design, and the effect of this crossing would be  
23 minimal to nonexistent because the proposed conveyance would traverse the railroad in a deep  
24 bore tunnel (see Chapter 19, *Transportation*, for discussion). The UPRR Tracy Subdivision (branch  
25 line) runs parallel to Byron Highway, between the highway and the proposed expanded Clifton  
26 Court Forebay. The proposed conveyance includes a siphon that would cross the railroad at the  
27 southwest corner of Clifton Court Forebay. However, construction is unlikely to disrupt rail service  
28 because much of this line has not been in service recently. Moreover, if the line were to come back in  
29 service, a temporary stretch of track would be installed to take trains around the siphon  
30 construction site. The temporary track would be removed once siphon construction was completed.  
31 Any potential effects on rail traffic during construction would be reduced with implementation of  
32 Mitigation Measure TRANS-1a, which would include stipulations to coordinate with rail providers to  
33 develop alternative interim transportation modes (e.g., trucks or buses) that could be used to  
34 provide freight and/or passenger service during any longer term railroad closures, and daily  
35 construction time windows during which construction would be restricted or rail operations would  
36 need to be suspended for any activity within railroad rights of way. This would minimize the  
37 potential risk of release of hazardous materials being transported via these railways (see Chapter  
38 19, *Transportation*, for a description).

39 In summary, during construction of the water conveyance facilities and geotechnical investigations,  
40 the potential would exist for direct effects on construction personnel, the public and/or the  
41 environment associated with a variety of potentially hazardous conditions because of the intensity  
42 of construction activities at the north Delta intakes, forebays, conveyance pipelines, and tunnels, and  
43 because of the hazardous materials that would be used in these areas. Many of these physical and  
44 chemical hazardous conditions would occur in close proximity to the towns of Hood and Courtland

1 during construction of the north Delta intakes and geotechnical investigations. This is particularly  
2 true for the town of Hood because a temporary 69-kV transmission line would be constructed  
3 around the town to the north, east and south, a 111-acre temporary intake work area would be  
4 potentially be located immediately south of the town, the town is located between Intakes 3 and 5,  
5 and geotechnical investigation activities (e.g., land boring and cone penetration) would be  
6 implemented within the town, as well as to the immediate north and south. It is expected that the  
7 temporary intake work area would likely be used for offices, equipment staging, delivery, parking,  
8 and it is not anticipated that heavy-duty construction activities would occur there. Additionally,  
9 large-scale construction activities involving the use of hazardous materials would be located in and  
10 near water bodies. Potential hazards include the routine transport, use or disposal of hazardous  
11 materials; natural gas accumulation in water conveyance tunnels; the inadvertent release of existing  
12 contaminants in soil and groundwater, or hazardous materials in existing infrastructure to be  
13 removed; disturbance of existing electrical transmission lines; and hazardous constituents present  
14 in RTM. Additionally, there is the potential for the construction of the water conveyance facilities to  
15 indirectly result in the release of hazardous materials through the disruption of existing road, rail, or  
16 river hazardous materials transport routes because construction would occur in the vicinity of three  
17 hazardous material transport routes, three railroad corridors, and waterways with barge traffic and  
18 would require construction traffic that could disrupt these routes. Were any of these potential  
19 hazards to occur the effect would be considered adverse because it would potentially result in direct  
20 exposure of the public (including construction personnel), and surface water and groundwater to  
21 physical and/or chemical hazards as discussed. Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and  
22 UT-6c (described in Chapter 20, *Public Services and Utilities*) and TRANS-1a (described in Chapter  
23 19, *Transportation*), combined with the previously described environmental commitments are  
24 available to address these effects. As such, construction of the water conveyance facilities would not  
25 create a substantial hazard to the public or the environment through the routine transport, use, or  
26 disposal of hazardous materials or the upset/accidental release of these materials. Accordingly, this  
27 would not be an adverse effect.

28 **CEQA Conclusion:** During construction of the water conveyance facilities and geotechnical  
29 investigations, the potential would exist for direct impacts on construction personnel, the public  
30 and/or the environment associated with a variety of hazardous physical or chemical conditions.  
31 Such conditions may arise as a result of the intensity and duration of construction activities at the  
32 north Delta intakes, forebays and conveyance pipelines and tunnels, and the hazardous materials  
33 that would be needed in these areas during construction. Potential hazards include the routine use  
34 of hazardous materials (as defined by Title 22 of the California Code of Regulations, Division 4.5);  
35 natural gas accumulation in water conveyance tunnels; the inadvertent release of existing  
36 contaminants in soil, sediment, and groundwater, or hazardous materials in existing infrastructure  
37 to be removed; disturbance of electrical transmission lines; and hazardous constituents present in  
38 RTM. Many of these physical and chemical hazardous conditions would occur in close proximity to  
39 the towns of Hood and Courtland during construction of the north Delta intakes. This is particularly  
40 true for the town of Hood because a temporary 69-kV transmission line would be constructed  
41 around the town of Hood, the town is located between Intakes 3 and 5, and a 111-acre temporary  
42 intake work area would potentially be located immediately south of the town, and geotechnical  
43 investigation activities (e.g., land boring and cone penetration) would be implemented within and  
44 to the immediate north and south of the town. Although the implementation of environmental  
45 commitments (e.g., SWPPPs, HMMPs, SPCCPs, SAPs, and a Barge Operations Plan) would help  
46 minimize the severity of this impact, the potential would still exist for the construction of the water  
47 conveyance facilities to indirectly result in the release of hazardous materials through the disruption

1 of existing road, rail, or river hazardous materials transport routes because construction would  
2 occur in the vicinity of three hazardous material transport routes, three railroad corridors, and  
3 waterways with barge traffic and would require construction traffic that could disrupt these routes.  
4 For these reasons, this is considered a significant impact. However, with the implementation of  
5 Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services*  
6 *and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the water  
7 conveyance facilities would not create a substantial hazard to the public or the environment through  
8 the routine transport, use, or disposal of hazardous materials or the upset/accidental release of  
9 these materials. These mitigation measures would reduce the severity of this impact to a less-than-  
10 significant level by identifying, avoiding, containing, and remediating suspected contaminated areas  
11 and structures containing hazardous material, and thereby preventing the release of hazardous  
12 materials into the environment; verifying the location of utility infrastructure prior to construction  
13 and relocating this infrastructure, as necessary, to minimize or avoid effects on worker and public  
14 health safety; reducing the potential for hazardous materials releases from trains within  
15 construction areas by coordinating with rail providers to develop alternative interim transportation  
16 modes, and daily construction time windows during which construction would be restricted or rail  
17 operations would need to be suspended for any activity within railroad rights of way. Accordingly,  
18 these mitigation measures would reduce the severity of this impact to a less-than-significant level.

19 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
20 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
21 **Construction Footprint, and Remediate and/or Contain Contamination**

22 Project proponents will identify potential areas of hazardous materials and remediate and/or  
23 contain contamination in order to reduce the likelihood of hazardous materials being released  
24 into the environment. The project proponents will perform preconstruction hazardous waste  
25 investigations at properties to be acquired for construction associated with the project. Areas to  
26 be excavated as part of construction of (e.g., for water conveyance facilities, shaft locations,  
27 concrete batch plants, intake locations, RTM storage areas, staging areas, forebays, borrow and  
28 spoil sites, barge unloading, restoration activities, and other appurtenant facilities) where  
29 historical contamination has been identified (e.g., SOCs) or where contamination is suspected  
30 (e.g., as evidenced by soil discoloration, odors, differences in soil properties, abandoned USTs)  
31 will undergo soil and/or groundwater testing at a certified laboratory provided that existing  
32 data is not available to characterize the nature and concentration of the contamination. Where  
33 concentrations of hazardous constituents, such as fuel, solvents or pesticides in soil or  
34 groundwater, exceed applicable federal or state thresholds, contaminated areas will be avoided  
35 or soil and/or groundwater removed from the contaminated area will be remediated and  
36 contained in compliance with applicable state and federal laws and regulations. If hazardous  
37 materials are encountered, consultation with the regional DTSC office will be required to  
38 establish which permit and subsequent action will be required to appropriately handle those  
39 hazardous materials. Groundwater removed with the dewatering system would be treated, as  
40 necessary, and discharged to surface waters under an NPDES permit (see Chapter 8, *Water*  
41 *Quality*).

42 Implementation of this mitigation measure will result in the avoidance, successful remediation  
43 or containment of all known or suspected contaminated areas, as applicable, within the  
44 construction footprint, which would prevent the release of hazardous materials from these  
45 areas into the environment.

**Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be Demolished within the Construction Footprint, Characterize Hazardous Materials and Dispose of Them in Accordance with Applicable Regulations**

Project proponents will perform surveys and characterize and dispose of hazardous materials in order to reduce the likelihood that hazardous materials are released into the environment.

Where demolition of existing structures is necessary, measures will be implemented to ensure hazards are avoided or minimized and that the release of hazardous materials, such as residual fuel in underground fuel storage tanks, or lead-based paint or asbestos-containing materials in buildings, is avoided. These measures will include the following practices.

- Perform pre-demolition surveys to identify all potentially hazardous materials, including asbestos-containing material and lead-based paint.
- Coordinate with owners of property to be acquired by project proponents to help identify potentially hazardous infrastructure and/or infrastructure containing potentially hazardous materials.
- Characterize and separate hazardous materials from structures before demolition and ensure that such materials are disposed of at an approved disposal site according to applicable regulations.
- Remove underground fuel storage tanks and contents to a licensed disposal site where the tanks will be scraped and the contents disposed of in accordance with applicable regulations.
- Disposal of materials containing PCBs will comply with all applicable regulations, codes, and ordinances. Disposal of large quantities of PCB waste will occur at incinerators approved for burning of PCB-containing waste.
- Implement proper handling and disposal procedures for potentially hazardous materials, such as solvents and household or industrial-strength maintenance chemicals and cleaners in buildings to be demolished.
- As applicable, a Cal-OSHA-certified asbestos and lead-based paint contractor will prepare a site-specific asbestos and/or lead hazard control plan with recommendations for the containment of asbestos and/or lead-based paint materials during demolition activities, for appropriate disposal methods and locations, and for protective clothing and gear for abatement personnel. Site-specific asbestos abatement work would meet the requirements of both the federal Clean Air Act and Cal-OSHA (CCR Title 8, Subchapter 4, Article 4, Section 1529). If asbestos-containing materials are found, contractors licensed to conduct asbestos abatement work will be retained and will direct the abatement. In addition, the applicable Air Quality Management District(s) will be notified 10 days prior to initiation of demolition activities of asbestos-containing materials.
- Containers suspected of, or confirmed as, containing lead-based paint will be separated from other building materials during the demolition process. Separated paint will be classified as a hazardous waste if the lead content exceeds 1,000 parts per million and will be disposed of in accordance with applicable regulations.
- Sewer lines will be plugged with concrete to prevent soil and/or groundwater contamination, and the end of the lines will be flagged above ground for future location and identification.

- 1 • Gas lines will be plugged or capped and the end of the lines will be flagged above ground for  
2 future location and identification.
- 3 • The use of explosives for demolition will not be allowed for any structures that contain  
4 asbestos, lead-based paint, or any other hazardous materials in concentrations that would  
5 create a substantial hazard to the public or the environment should they become airborne as  
6 a result of blasting.
- 7 • Hazardous waste, including contaminated soil, generated at demolition sites will be handled,  
8 hauled, and disposed of at an appropriately licensed disposal facility under appropriate  
9 manifest by a licensed hazardous waste hauler.

10 Implementation of this measure will ensure that hazardous materials present in or associated  
11 with structures being demolished will not be released into the environment.

#### 12 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

13 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
14 Chapter 20, *Public Services and Utilities*.

#### 15 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or** 16 **Minimizes Any Effect on Worker and Public Health and Safety**

17 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
18 Chapter 20, *Public Services and Utilities*.

#### 19 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management** 20 **Plan**

21 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
22 1A in Chapter 19, *Transportation*.

#### 23 **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to** 24 **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance** 25 **Facilities**

26 **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
27 an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
28 pose a health hazard. There are no hospitals, schools or parks located within 0.25 mile of Alternative  
29 4.

30 However, an operable barrier would be constructed under this alternative at the head of Old River  
31 near the Mossdale Village area of Lathrop, adjacent to land designated for public use and which  
32 could include future schools or parks. If a school or park were built prior to the completion of  
33 construction of the operable barrier, sensitive receptors would be in close proximity to project  
34 construction activities, creating the potential for an adverse effect. However, because there is  
35 currently no school or park within 0.25 mile of the operable barrier site, and because no school or  
36 park is currently proposed within 0.25 mile of that site, there would be no adverse effect on  
37 sensitive receptors at this site.

38 Therefore, no sensitive receptors would be exposed to hazardous materials, substances, or waste as  
39 a result of construction of the water conveyance facilities under Alternative 4. As such, there would

1 be no effect. Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air*  
2 *Quality and Greenhouse Gases*.

3 **CEQA Conclusion:** A significant impact may occur if a construction work site is located within 0.25  
4 mile of an existing or proposed school, or other sensitive receptor, and releases hazardous materials  
5 that pose a health hazard. There are no schools, parks or hospitals located within 0.25 mile of the  
6 Alternative 4 water conveyance facilities alignment. However, an operable barrier would be  
7 constructed at the head of Old River near the Mossdale Village area of Lathrop, adjacent to land  
8 designated for public use and which could include future schools or parks. If a school or park were  
9 built prior to the completion of construction of the operable barrier, sensitive receptors would be in  
10 close proximity to project construction activities, creating the potential for an impact on those types  
11 of sensitive receptors. However, no school or park is currently proposed within 0.25 mile of the  
12 proposed operable barrier site.

13 Therefore, no sensitive receptors would be exposed to hazardous materials, substances, or waste as  
14 a result of construction of the water conveyance facilities under Alternative 4. As such, there would  
15 be no impact. Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air*  
16 *Quality and Greenhouse Gases*.

17 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
18 **Create a Significant Hazard to the Public or the Environment**

19 **NEPA Effects:** As described in Section 24.1, *Environmental Setting/Affected Environment*, the storage  
20 and use of bulk quantities of hazardous materials, such as pesticides, fuels, and solvents, is common  
21 throughout the study area. The locations of known or suspected SOCs that may have contaminated  
22 soils and/or groundwater were identified in the study area during the ISA and are presented in  
23 Figure 24-4. SOCs within 0.5 mile of the construction footprint, as well as those within the  
24 construction footprint, for this alternative are identified in Table 24-5. The number of SOCs may  
25 change during right-of-way evaluation, land acquisition and preconstruction site-clearance  
26 investigations or during construction. Additional SOCs may be identified during these activities, and  
27 currently identified SOCs may be determined innocuous after site-specific field investigation and  
28 testing.

29 California Government Code 65962.5 directs DTSC to compile a list, known as the “Cortese List,” of  
30 hazardous materials sites. These sites consist of leaking underground storage tanks, solid waste  
31 facilities, landfills and sites with potential or confirmed hazardous substance releases. Although this  
32 list is no longer updated by the state, it nonetheless provides valuable information to developers to  
33 prevent the re-release of hazardous materials resulting from excavation or disturbance of hazardous  
34 materials by preventing unanticipated disturbance of these sites. “Cortese List” sites make up a  
35 subset of the mapped SOCs.

36 There are no “Cortese List” sites or known SOCs within the construction footprint of Alternative 4  
37 (Table 24-5 and Figure 24-4). As such, there would be no conflict pertaining to a known hazardous  
38 materials site during construction, including for either the north-south or east-west transmission  
39 line option, for this alternative of the water conveyance facilities, and thus, no related hazard to the  
40 public or the environment. For those hazardous materials sites identified within the 0.5-mile radius  
41 but which are not within the construction footprint, there would be no potential for construction of  
42 the water conveyance facilities to disturb those sites such that there would be a re-release of  
43 hazardous materials that would create a hazard for the public or environment. As such, there would

1 be no effect. The potential for encountering unknown hazardous materials sites during the course of  
2 construction is discussed under Impact HAZ-1.

3 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
4 conveyance facility for Alternative 4 there would be no conflict with known hazardous materials  
5 sites during construction of the water conveyance facilities, and therefore, no related hazard to the  
6 public or the environment. Accordingly, there would be no impact. No mitigation is required. The  
7 potential for encountering unknown hazardous materials sites during the course of construction is  
8 discussed under Impact HAZ-1.

9 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
10 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
11 **Study Area during Construction of the Water Conveyance Facilities**

12 **NEPA Effects:** Development around an airport, particularly in the approach and departure paths, can  
13 create obstructions in the airspace traversed by an approaching or departing aircraft. Additionally,  
14 certain land uses have the potential to create hazards to aircraft such as a distracting glare, smoke,  
15 steam, or invisible heat plumes. Safety impacts from aircraft accidents near airports are typically  
16 avoided by specifying the types of land uses allowed, and thereby limiting the number of people who  
17 would be exposed to the risk of an accident, and avoiding land uses that could create hazards to air  
18 traffic. Airspace protection primarily involves limitations on the height of objects on the ground near  
19 airports.

20 High-profile construction equipment, such as tall cranes for installation of pipelines, placement of  
21 concrete fill in intake piles, and removal of cofferdam sheet piles, for example, and pile drivers, such  
22 as would be used during the construction of the intakes, have the potential to result in safety  
23 hazards to aircraft during takeoff and landing if the equipment is operated too close to runways. It is  
24 not yet known what the maximum height of the high-profile construction equipment that would be  
25 used would be. Tower cranes, for example, may be required, and a typical tower crane can have a  
26 total height greater than 200 feet—a height that could be considered an obstruction or hazard to  
27 navigable air space if located near an airport.

28 As shown in Figure 24-9 and Table 24-6, three private airports (Borges-Clarksburg Airport, Spezia  
29 Airport, and Flying B Ranch Airport) and two public airports (Byron Airport and Franklin Field  
30 Airport) are located within 2 miles of the water conveyance facilities for Alternative 4. The Borges-  
31 Clarksburg Airport, located 2 miles northeast of the town of Clarksburg, is within 2 miles of a tunnel  
32 work area, a temporary access road, and a RTM area. Spezia Airport, on Tyler Island, is within 2  
33 miles of two ventilation/access shafts, a tunnel work area, and a permanent access road. Flying B  
34 Ranch Airport, in Elk Grove, is within 2 miles of a proposed temporary 230-kV transmission line.  
35 Byron Airport, less than 1.5 miles west of Clifton Court Forebay, is within 2 miles of a proposed RTM  
36 area; a proposed permanent access road, as well as a temporary access road; a proposed permanent  
37 230-kV transmission line; temporary work areas; and a siphon and a canal related to the proposed  
38 expansion of Clifton Court Forebay. Franklin Field Airport, approximately 4 miles southeast of  
39 Franklin, is less than 1 mile from a proposed temporary 230-kV transmission line. In addition, an  
40 existing 230-kV and 500-kV transmission line, both located south of Clifton Court Forebay, would be  
41 relocated to an area further south/southeast within 0.5 mile of their original location. However,  
42 because the nearest airport, Byron Airport, is over 3 miles away, this work is not expected to pose  
43 an air safety hazard. With the exception of the proposed transmission lines, construction of these  
44 features or work in these areas would not require the use of high-profile construction equipment.

1 Because construction of the proposed transmission lines would potentially require high-profile  
2 equipment (e.g., cranes), and because construction of the proposed 230-kV transmission lines would  
3 require the use of helicopters during the stringing phase, the safety of air traffic arriving or  
4 departing from either of these airports could be compromised during construction of the proposed  
5 transmission lines.

6 To help ensure protection of airspace, under 14 CFR Part 77, the FAA requires project proponents to  
7 inform them about proposed construction or alteration of objects within 20,000 feet of a public-use  
8 or military runway and having a height exceeding a 100:1 imaginary surface (1 foot upward per 100  
9 feet horizontally) beginning at the nearest point of the runway for runways greater than 3,200 feet  
10 in length. For shorter public-use or military runways, the notification surface has a 50:1 slope and  
11 extends 10,000 feet from the runway. Exceptions to this notification requirement are made for “any  
12 object that would be shielded by existing structures of a permanent and substantial character or by  
13 natural terrain or topographic features of equal or greater height, and would be located in the  
14 congested area of a city, town, or settlement where it is evident beyond all reasonable doubt that the  
15 structure so shielded would not adversely affect safety in air navigation.” Notice must be provided  
16 for temporary objects such as construction cranes and any object more than 200 feet in height above  
17 ground level or above the established airport elevation. Notification of the FAA enables them to  
18 evaluate the effect of the proposed object on air navigation through an aeronautical study (OE/AAA).  
19 The OE/AAA would indicate whether the project would have a “substantial adverse effect” on air  
20 safety. If it is determined that the proposed structure or structures exceeds obstruction standards or  
21 would have an adverse effect on navigable airspace, the project proponent is given the opportunity  
22 to amend the project proposal to avoid the impact; adjustments to aviation requirements that would  
23 accommodate the project are investigated as well. As described in Section 24.2.2.17, *State*  
24 *Aeronautics Act*, Caltrans requires notification, in writing, for proposed construction of any state  
25 building or enclosure within 2 miles of any airport before an agency acquires title to the property  
26 for the building or enclosure or for an addition to an existing site (Public Utilities Code, Section  
27 21655). Caltrans would respond with a written investigation report of the proposed site and provide  
28 recommendations, as necessary, to reduce potential hazards to air navigation. As part of an  
29 environmental commitment pursuant to the State Aeronautics Act, DWR would adhere to these  
30 recommendations (e.g., recommendations for the marking and/or lighting of temporary or  
31 permanent structures exceeding an overall height of 200 feet above ground level), which would  
32 reduce the potential for adverse effects on air safety, as would compliance with the  
33 recommendations of the OE/AAA (see Appendix 3B, *Environmental Commitments, AMMs, and CMs*).  
34 Accordingly, this would not be an adverse effect.

35 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
36 relocating the existing 230-kV and 500-kV transmission lines, and of high-profile construction  
37 equipment (200 feet or taller), such as cranes, for installation of pipelines, and potentially pile  
38 drivers, such as would be used during the construction of the intakes, have the potential to result in  
39 safety hazards to aircraft during takeoff and landing if the equipment is operated too close to  
40 runways. Three private airports (Borges-Clarksburg Airport, Spezia Airport, and Flying B Ranch  
41 Airport) and two public airports (Byron Airport and Franklin Field Airport) are located within 2  
42 miles of the construction footprint of several features of the water conveyance facilities for  
43 Alternative 4, including temporary and permanent transmission lines. Relocation of the existing  
44 230-kV and 500-kV transmission lines is not expected to result in an air safety hazard because the  
45 nearest airport to the new location is greater than 3 miles away.

1 DWR would coordinate with Caltrans' Division of Aeronautics prior to initiating construction and  
 2 comply with its recommendations based on its investigations and compliance with the  
 3 recommendations of the OE/AAA (for Byron and Franklin Field Airports). These recommendations,  
 4 which could include limitations necessary to minimize potential problems such as the use of  
 5 temporary construction equipment, supplemental notice requirements, and marking and lighting  
 6 high-profile structures, would reduce potential impacts on air safety. Accordingly, this impact would  
 7 be less than significant. No mitigation is required.

8 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 9 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 10 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 11 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

12 **NEPA Effects:** As shown in Figure 24-10, no portion of Alternative 4 is located in or near an area  
 13 designated as a High or Very High Fire Hazard Severity Zone. The northernmost and southernmost  
 14 portions of Alternative 4, where intake facilities and fuel stations, and the expanded Clifton Court  
 15 Forebay, respectively, would be located, are near Moderate Fire Hazard Severity Zones (Figure 24-  
 16 10), as is the site of the operable barrier at the head of Old River. Construction, operation, and  
 17 maintenance of the water conveyance facilities would involve the use of equipment and ignitable  
 18 materials, and would involve activities that could potentially start fires. For example, as discussed in  
 19 Chapter 3, *Description of Alternatives*, facility maintenance would consist of activities such as  
 20 painting, cleaning, repairs, and other routine tasks. Some of these activities would involve the use of  
 21 flammable chemicals, such as fuels and solvents, which could be inadvertently ignited by sparks  
 22 from equipment/machinery if proper safety measures were not employed. Further, during  
 23 construction, fires could be caused by a variety of factors, including vehicle exhaust, welding  
 24 activities, parking on dry grass, and accidental ignition of fuel. However, as previously discussed, the  
 25 study area mainly consists of agricultural lands with pockets of rural residential land uses that are  
 26 not adjacent to wildlands, as well as residential areas that are intermixed with wildlands. The  
 27 potential for construction or operation and maintenance activities to generate hazards associated  
 28 with wildland fires would be minimal. Further, as described in Appendix 3B, *Environmental*  
 29 *Commitments, AMMs, and CMs*, measures to prevent and control wildland fires would be  
 30 implemented by DWR during construction, operation, and maintenance of the water conveyance  
 31 facilities in full compliance with Cal-OSHA standards for fire safety and prevention. These measures  
 32 would include, but not be limited to, the following.

- 33 ● Construction sites will have an adequate onsite supply of water and all-weather access for  
 34 firefighting equipment and emergency vehicles.
- 35 ● A list of all major fire hazards, proper handling and storage procedures for hazardous materials,  
 36 potential ignition sources and their control, and the type of fire protection equipment necessary  
 37 to control each major hazard.
- 38 ● Smoking will be allowed only in areas designated for smoking, and these areas will be cleared of  
 39 vegetation, or in enclosed vehicles. Cigarette butts are to be disposed of in car ashtrays or other  
 40 approved disposal containers and dumped daily in a proper receptacle off the work site.
- 41 ● The contractor will be responsible for maintaining appropriate fire suppression equipment at  
 42 the work site including an all-wheel drive water truck or fire truck with a water tank of at least  
 43 3,000 gallon capacity. Fire extinguishers, shovels and other firefighting equipment will be  
 44 available at work sites and on construction equipment. Each vehicle on the ROW will be

1 equipped with a minimum 20 pound (or two 10 pound) fire extinguisher(s) and a minimum of 5  
2 gallons of water in a fire fighting apparatus (e.g., bladder bag).

- 3 • At the work site, a sealed fire toolbox will be located at a point accessible in the event of fire.  
4 This fire toolbox will contain: one back-pack pump-type extinguisher filled with water, two axes,  
5 two McLeod fire tools, and enough shovels so that each employee at the work site can be  
6 equipped to fight fire.
- 7 • Gasoline-powered construction equipment with catalytic converters will be equipped with  
8 shielding or other acceptable fire prevention features. Internal combustion engines will be  
9 equipped with spark arrestors.
- 10 • Welding sites will include fire prevention provisions.
- 11 • The contractor will maintain contact with local firefighting agencies throughout the fire season  
12 for updates on fire conditions, and such fire conditions will be communicated to the contractor's  
13 employees daily.
- 14 • Vehicles will be restricted to the work site unless otherwise allowed for fire control procedures.
- 15 • Depending on the characteristics of the construction site, the dimensions and use of the rooms,  
16 the on-site equipment, the physical and chemical properties of the substances present and the  
17 maximum potential number of workers present, an adequate number of appropriate basic fire-  
18 fighting devices and, where required, automatic fire extinguishing systems shall be provided at  
19 the site.
- 20 • Basic fire-fighting devices and automatic fire extinguishing systems shall be regularly  
21 maintained, checked and tested.
- 22 • Basic fire-fighting devices shall be positioned in a visible place which is free from obstruction.
- 23 • The location of fire-fighting equipment shall be indicated by fire safety signs. The signs shall be  
24 sufficiently resistant and placed at appropriate points.
- 25 • If substances which can cause combustion or substances the use of which may produce  
26 explosive dust or gas are used or preserved on a construction site, special protective measures  
27 (ventilation, prohibition on the use of open fire, etc.) shall be applied in order to prevent the risk  
28 of fire and explosion.
- 29 • Every person at work on a construction site shall, so far as is reasonably practicable, be  
30 instructed in the correct use of any fire-fighting equipment which it may be necessary for him to  
31 use.

32 These measures and potentially others would be guided by implementation of a FPCP in  
33 coordination with federal, state, and local agencies, as part of the project as an environmental  
34 commitment (Appendix 3B, *Environmental Commitments, AMMs, and CMs*). Because development  
35 and implementation of measures under the FPCP would help ensure that people or structures would  
36 not be subject to a substantial risk of loss, injury or death involving wildland fires and because the  
37 proposed water conveyance facilities would not be located in a High or Very High Fire Hazard  
38 Severity Zone, this effect would not be adverse.

39 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
40 death involving wildland fires during construction or operation and maintenance of the water  
41 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and

1 safety standards; DWR would implement standard fire safety and prevention measures as part of an  
2 FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
3 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
4 Therefore, this impact would be less than significant. No mitigation is required.

5 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
6 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
7 **Water Conveyance Facilities**

8 **NEPA Effects:** During long-term operation and maintenance of the water conveyance facilities, the  
9 transport, storage, and use of chemicals or hazardous waste materials may be required. Hazardous  
10 waste generated at facility sites would be handled, hauled, and disposed of at an appropriately  
11 licensed disposal facility under appropriate manifest by a licensed hazardous waste hauler (see  
12 Appendix 3B, *Environmental Commitments, AMMs, and CMs*). Maintenance requirements for the  
13 tunnels have not yet been finalized (See Chapter 3, *Description of Alternatives*, Section 3.6.1.2, for a  
14 general description of the operation and maintenance requirements for the water conveyance  
15 facilities). However, the operation and maintenance of certain alternative features, such as the  
16 pumping plants, would require the use of hazardous materials, such as fuel, oils, grease, solvents,  
17 and paints. For example, planned maintenance at pumping facilities would include checking oil  
18 levels, replacing oil in the pumps, and greasing pump bearings. Additionally, routine facility  
19 maintenance would involve painting the pumping plants and appurtenant structures, cleaning,  
20 repairs, and other routine tasks that ensure the facilities are operated in accordance with design  
21 standards.

22 Under this alternative, in which only three intake facilities would be operated and maintained, the  
23 potential for hazards associated with the two pumping plants and sediment basins would be less  
24 widespread than under alternatives with five intake facilities. Furthermore, Alternative 4 does not  
25 involve an intermediate pumping plant at the intermediate forebay; the relatively smaller, control  
26 structure that would replace it would potentially have fewer or less intense hazards associated with  
27 its operation and maintenance. However, the operation and maintenance of an operable barrier  
28 under this alternative would expand the potential for hazards. Solids collected at the solids lagoons,  
29 and sediment dredged during periodic maintenance dredging at the intakes and operable barrier at  
30 the head of Old River may contain hazardous constituents (e.g., persistent pesticides, mercury,  
31 PCBs). Sediment accumulation in both the northern and southern portion of the expanded Clifton  
32 Court Forebay is expected to be minimal over the 50-year permit period. However, it is anticipated  
33 that there may be some sediment accumulation at the inlet structure of the northern portion of  
34 Clifton Court Forebay. Therefore, while overall sediment accumulation in this forebay is not  
35 expected to be substantial, some dredging may be required at the inlet structure to maintain an even  
36 flow path.

37 Facility equipment maintenance would be required for the two pumping plants near Clifton Court  
38 Forebay, the sedimentation basins and solids lagoons, the intermediate forebay, the control  
39 structure at the proposed expanded Clifton Court Forebay and at the operable barrier and boat lock  
40 at the head of Old River. Timing of maintenance activities would be variable and would be dictated  
41 by the schedule and day-to-day requirements of specific components being maintained.  
42 Maintenance activities at the intakes would include debris and sediment removal, biofouling and  
43 corrosion prevention, and repairs following physical impacts on the intake structures. Sediment and  
44 solids removal from the sedimentation basins and solids lagoons, respectively, is expected to be an  
45 ongoing process during operation of the water conveyance facilities. During operation of the water

1 conveyance facilities, water would enter sedimentation basins at three intakes along the east bank  
2 of the Sacramento River in the north Delta. Settled sediment would then be pumped to solids  
3 lagoons where it would be dewatered and removed for disposal off site; sediment pore water would  
4 be pumped back into the sedimentation basins. The dewatered solids, like sediment dredged at the  
5 intakes, may contain pesticides from agricultural and urban areas, metals or organic compounds  
6 from urban stormwater runoff, and mercury from historic mining upstream of the Delta. The wide  
7 variety of pesticides that has been applied, the numerous crops grown in the region, and the fact  
8 that predominant land use across the Delta supports agriculture indicate that persistent pesticides  
9 that have been widely applied (e.g., organochlorines) and are likely to be found in the soils and  
10 potentially sediment throughout the Delta. Because of their relatively low water solubility,  
11 persistent pesticides and compounds generally accumulate in the environment in sediment and soil  
12 as well as in the fatty tissue of terrestrial and aquatic animals and humans. Human exposure to  
13 organochlorine pesticides is primarily through the diet. No comprehensive area-wide soil or  
14 sediment sampling program is known to have been conducted to evaluate pesticide residues from  
15 agricultural use. Thus, it is not known if persistent pesticide concentrations in dewatered solids  
16 from the solids lagoons, or in dredged sediment from around the intakes, would exceed applicable  
17 federal or state standards. As previously described, although the concentration of mercury in  
18 sediment throughout the study area is not known, one study indicated that the mercury  
19 concentration in sediment (suspended) at Freeport, just upstream of the intake locations, was less  
20 than 10 ng/l, below the recommended criterion of 50 ng/l (Domagalski 2001).

21 Based on a worst-case scenario for alternatives with three intakes, considering the throughput of  
22 the intakes at a maximum flow of 3,000 cfs, less than 100,000 dry pounds of solids per day would be  
23 pumped to the solids lagoons. During periods of high sediment load in the Sacramento River, the  
24 daily mass of solids would be expected to increase to up to approximately 152,000 dry pounds per  
25 day. The annual volume of solids is anticipated to be less than 300,000 cubic feet (dry solids). An  
26 anticipated 10,800 cubic yards of dry sediment/solids would be produced annually as a result of  
27 maintenance of the solids lagoons with three intakes operating. Potentially contaminated solids  
28 could pose a hazard to the environment if improperly disposed of, which would be considered an  
29 adverse effect. However, with implementation of Mitigation Measure HAZ-6, solids from the solids  
30 lagoons would be sampled and characterized to evaluate disposal options, and disposed of  
31 accordingly at an appropriate, licensed facility. Implementation of the mitigation measure would  
32 help ensure that there are no adverse effects on soil, groundwater or surface water due to  
33 improperly disposed of solids from the solids lagoons. Dewatered solids may require special  
34 management to meet discharge/disposal requirements.

35 To ensure that potentially contaminated sediment from maintenance dredging activities would not  
36 adversely affect soil, groundwater or surface water, a SAP would be implemented prior to any  
37 dredging activities, as described under Impact HAZ-1 for this alternative. All dredged sediment  
38 would be characterized chemically prior to reuse to ensure that reuse of this material would not  
39 result in a hazard to the public or the environment. To the extent practicable, scheduled routine and  
40 emergency maintenance activities associated with equipment at the intakes would be conducted at a  
41 permanent maintenance facility located at one of the three intakes sites; the precise location has not  
42 yet been determined. Replacement of erosion protection on the levees and embankments would also  
43 occur periodically.

44 The operable barrier at the head of Old River would require control gate maintenance every 5–10  
45 years; and annual maintenance of the motors, compressors, and control systems. The site would also  
46 include a boat lock operator's building and a control building, which would both require periodic

1 routine maintenance. All these would involve potentially hazardous fluids, as described below.  
2 Maintenance dredging around the gate to clear out sediment deposits could occur every 3–5 years,  
3 and spoils would be dried in adjacent areas. Implementation of a SAP prior to any dredging activities  
4 would help ensure that there are no adverse effects on soil, groundwater or surface water due to  
5 improperly disposed of or reused sediment.

6 Some of the materials used in routine facility and equipment maintenance may include hydraulic oil  
7 for lubricating machinery, fuel, batteries for vehicles and equipment, nitrogen, carbon dioxide or  
8 clear agent fire suppression, paints, cleaning solvents and chemicals, and pesticides and herbicides  
9 for grounds maintenance. Some of these materials, for example, bulk fuel and lubricants, would  
10 likely be stored in the maintenance facilities. Vehicle fueling that occurs during operations and  
11 maintenance activities and could pose the risk of fueling spills and leakage from bulk fuel storage  
12 tanks. Accidental release of fuels, lubricants, solvents, grounds care chemicals (e.g., fertilizers,  
13 pesticides and herbicides), and other hazardous materials could potentially have adverse effects if  
14 not contained or if released in large enough quantities, as described under Impact HAZ-1 above.  
15 However, under normal use, the inadvertent release of these types of chemicals would likely only  
16 have the potential to result in minor, temporary hazards to workers immediately adjacent to these  
17 releases. Because these chemicals would be used in small quantities and inadvertent releases would  
18 be localized, and because, as discussed under Impact HAZ-1, environmental commitments  
19 implemented as part of the HMMPs, SPCCPs, and SWPPPs, including equipping facility buildings with  
20 spill containment and cleanup kits; ensuring that hazardous materials containment containers are  
21 clearly labeled with identity, handling and safety instructions, and emergency contact information;  
22 and requiring that personnel be trained in emergency response and spill containment techniques,  
23 would minimize the potential for the accidental release of hazardous materials and would help  
24 contain and remediate hazardous spills should they occur, it is unlikely that the general public or the  
25 environment would be adversely affected due to these types of activities.

26 The locations of airports with respect to the pipeline/tunnel alignment are provided in Figure 24-9.  
27 The Borges-Clarksburg, Flying B Ranch, and Spezia Airports (private air facilities), and Byron and  
28 Franklin Field Airports (public air facilities) would be within 2 miles of this alternative's  
29 construction footprint (Figure 24-9 and Table 24-6), as described under Impact HAZ-4 for this  
30 alternative. With the exception of power transmission lines supplying power to pumps, water  
31 conveyance facilities operations and maintenance are not anticipated to require high-profile  
32 equipment (i.e., equipment with a vertical reach of 200 feet or more), the use of which near an  
33 airport runway could result in an adverse effect on aircraft. DWR would adhere to all applicable FAA  
34 regulations (14 CFR Part 77) and coordinate and comply with Caltrans' Division of Aeronautics  
35 when performing work with high-profile equipment within 2 miles of an airport to avoid adverse  
36 effects on air safety. Compliance with these recommendations, which could include limitations  
37 necessary to minimize potential problems, such as the use of temporary construction equipment,  
38 supplemental notice requirements, and marking and lighting high-profile structures would reduce  
39 the potential for impacts on air safety.

40 In summary, during routine operation and maintenance of the water conveyance facilities the  
41 potential would exist for the accidental release of hazardous materials and other potentially  
42 hazardous releases (e.g., contaminated solids and sediment), and for interference with air safety  
43 should high-profile equipment be required for maintenance of the proposed transmission lines near  
44 an airport. Accidental hazardous materials releases, such as chemicals directly associated with  
45 routine maintenance (e.g., fuels, solvents, paints, oils), are likely to be small, localized, temporary  
46 and periodic; therefore, they are unlikely to result in adverse effects on workers, the public, or the

1 environment. Further, BMPs and measures implemented as part of SWPPPs, SPCCPs, SAPs and  
 2 HMMPs would be developed and implemented as part of the project, as described under Impact  
 3 HAZ-1, and in detail in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, which would  
 4 reduce the potential for accidental spills to occur and would result in containment and remediation  
 5 of spills should they occur. Approximately 10,800 cubic yards of dry sediment/solids would be  
 6 produced annually as a result of maintenance of the solids lagoons with three intakes operating.  
 7 Potentially contaminated solids could pose a hazard to the environment if improperly disposed of,  
 8 which would be an adverse effect. Under Mitigation Measure HAZ-6, solids from the solids lagoons  
 9 would be sampled and characterized to evaluate disposal options, and disposed of accordingly at an  
 10 appropriate, licensed facility to ensure that there would be no adverse effect.

11 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
 12 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
 13 substantial hazard to the public or the environment and, accordingly, there would be no adverse  
 14 effect.

15 **CEQA Conclusion:** The accidental release of hazardous materials (including contaminated solids and  
 16 sediment) to the environment during operation and maintenance of the water conveyance facilities  
 17 and the potential interference with air safety through the use of high-profile equipment for  
 18 maintenance of proposed transmission lines could result in significant impacts on the public and  
 19 environment. However, implementation of the BMPs and other activities required by SWPPPs,  
 20 HMMPs, SAPs, SPCCPs, as well as adherence to all applicable FAA regulations (14 CFR Part 77) and  
 21 coordination/compliance with Caltrans' Division of Aeronautics when performing work with high-  
 22 profile equipment within 2 miles of an airport, which would include implementation of  
 23 recommendations to provide supplemental notice and/or equip high-profile structures with  
 24 marking and lighting, would ensure that operation and maintenance of the water conveyance  
 25 facilities would not create a substantial hazard to the public, environment or air traffic safety.  
 26 10,800 cubic yards of dry sediment/solids would be produced annually as a result of maintenance of  
 27 the solids lagoons with three intakes operating. Contaminated solids could pose a hazard to the  
 28 environment if improperly disposed of, which would be considered a significant impact. However,  
 29 with implementation of Mitigation Measure HAZ-6, solids from the solids lagoons would be sampled  
 30 and characterized to evaluate disposal options, and would be disposed of accordingly at an  
 31 appropriate, licensed facility to avoid any significant impacts associated with the improper disposal  
 32 of potentially contaminated sediment. Therefore, this impact would be less than significant.

### 33 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse** 34 **and/or Disposal**

35 Project proponents will ensure that dewatered solids from the solids lagoons are sampled and  
 36 tested/characterized at a certified laboratory prior to reuse and/or to evaluate disposal options.  
 37 At minimum, the solids would be tested for hazardous characteristics (i.e., toxicity, corrosivity,  
 38 ignitability, and reactivity) consistent with federal standards for identifying hazardous waste  
 39 (40 CFR Part 261). All dewatered solids would be disposed of in accordance with applicable  
 40 federal, state, and local regulations at a solid waste disposal facility approved for disposal of  
 41 such material.

42 Implementation of this measure will ensure that dewatered solids do not reintroduce hazardous  
 43 constituents to the environment if they are reused, and that they are disposed of properly if they  
 44 do contain hazardous levels of contaminants such as persistent pesticides and mercury.

1 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
2 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
3 **CM13, CM14, CM16, CM18 and CM19**

4 **NEPA Effects:** Construction, and operation and maintenance of CM2–CM11, CM13, CM14, CM16,  
5 CM18 and CM19 as part of Alternative 4 could have effects related to hazardous materials and  
6 potential hazards that are similar in nature to those discussed for construction, and operation and  
7 maintenance of proposed water conveyance facilities. Although similar in nature, the potential  
8 intensity of any effects would likely be substantially lower because the nature of the activities  
9 associated with implementing the conservation measures would be different (e.g., deep excavation  
10 for pipelines and tunnels would not be required), less heavy construction equipment would be  
11 required, and the activities would be implemented in a shorter time frame. Further, potential effects  
12 from implementation of the conservation measures would be dispersed over a larger area and  
13 would generally involve substantially fewer construction and operation effects associated with built  
14 facilities.

15 Implementing habitat restoration and enhancement projects in conservation zones that have  
16 proposed restoration opportunity areas would require use of construction equipment necessary to  
17 excavate restoration sites, and to construct or modify levees on and adjacent to Delta waterways.  
18 Use and maintenance of this equipment is expected to result in the potential for hazards related to  
19 the transport, use, and disposal of hazardous materials, such as fuels, oils, lubricants, paints and  
20 other hazardous substances. Other activities, including the intentional demolition of existing  
21 structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM, would also present the  
22 potential to generate hazards or release hazardous materials, or activities resulting in the damage or  
23 disruption of existing infrastructure such that hazardous conditions were created.

24 Some of the proposed restoration activities that would occur under CM2 – CM11 could involve the  
25 conversion of active or fallow agricultural lands to natural landscapes, such as vernal pools,  
26 floodplains, grasslands, and wetlands. As described in Section 24.1.2.2, Hazards from Agricultural  
27 Practices, a wide variety of pesticides has been used throughout the study area for decades, and may  
28 be present in agricultural lands (e.g., in the soil). As described in Chapter 8, *Water Quality*, in the  
29 short-term, tidal and non-tidal wetland restoration, as well as seasonal floodplain restoration (i.e.,  
30 CM4, CM5, and CM10) over former agricultural lands may result in contamination of water in these  
31 restored areas with pesticide residues contained in the soils or other organic matter. Present use  
32 pesticides typically degrade fairly rapidly, and in such cases where pesticide containing soils are  
33 flooded, dissipation of those pesticides would be expected to occur rapidly. Additionally, significant  
34 increases in organochlorine and other persistent legacy pesticides are not expected in the water  
35 column because these lipophilic chemicals strongly partition to sediments. Also, concentrations in  
36 the water column should be relatively short-lived because these pesticides settle out of the water  
37 column via sediment adsorption in low-velocity flow. Accordingly, restoration activities on former  
38 agricultural lands, particularly tidal and non-tidal wetland restoration, and seasonal floodplain  
39 restoration, would not create a substantial hazard to the public or environment through pesticide  
40 release.

41 In addition, certain operations and maintenance activities, such as controlling for terrestrial and  
42 aquatic nonnative vegetation will require the use of potentially hazardous herbicides, for example.  
43 These activities would occur in sensitive Delta waterways and upland areas or could occur in and  
44 around areas potentially hazardous for construction workers and operations and maintenance

1 workers. Reasonably foreseeable upset and accident conditions related to these materials would  
2 also create a potential hazard to the public or environment.

3 As discussed in Chapter 8, *Water Quality*, Chapter 11, *Fish and Aquatic Resources*, and Chapter 25,  
4 *Public Health*, Alternative 1A habitat restoration actions (particularly CM2, *Yolo Bypass Fisheries*  
5 *Enhancement*; CM4, *Tidal Natural Communities Restoration*; CM5, *Seasonally Inundated Floodplain*  
6 *Restoration*; CM6, *Channel Margin Enhancement*; and CM7, *Riparian Natural Community Restoration*)  
7 are likely to result in increased production, mobilization, and bioavailability of methylmercury in the  
8 aquatic system due to biogeochemical processes. CM12, *Methylmercury Management* provides for  
9 site-specific assessment of restoration areas, integration of design measures to minimize  
10 methylmercury production, and site monitoring and reporting.

11 Additionally, construction of other conservation measures related to reducing ecosystem stressors  
12 could result in the unintended release of hazardous materials as a result of constructing facilities  
13 near Delta waterways. For example, under CM16 and CM18, non-physical fish barriers and fish  
14 hatchery facilities, respectively, would be constructed and could result in effects associated with use  
15 of materials during construction that could create hazardous conditions for construction workers  
16 and affect sensitive habitat in Delta waterways or on agricultural land. Further, operations and  
17 maintenance of CM14 would require the transport, storage and use of liquid oxygen for the existing  
18 Stockton Deep Water Ship Channel aeration facility. BMPs already in place for the existing transport,  
19 storage and use of liquid oxygen would continue. Thus, no adverse effects related to this aspect of  
20 CM14 are anticipated.

21 The potential also exists for release of hazardous substances within 0.25 mile of a school or other  
22 sensitive receptors (i.e., hospitals and parks) depending on the selected locations for implementing  
23 the conservation measures. Potential effects would vary according to the equipment used in  
24 construction and/or operation and maintenance of a specific conservation measures (i.e., whether  
25 hazardous materials are necessary on site), the location and timing of the actions called for in the  
26 conservation measure, and the air quality conditions at the time of implementation. Proposed  
27 conservation measures would be designed to avoid sensitive receptors, and BMPs to minimize the  
28 potential for the accidental release of hazardous materials and to contain and remediate hazardous  
29 spills, as part of the SWPPPs, SPCCPs, and HMMPs, should they occur, would be implemented, as set  
30 forth in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, and therefore, it is unlikely that  
31 school children and staff would be at risk or adversely affected.

32 Constructing conservation measures that could result in a physical change in the environment could  
33 also create conflicts or encounters with known or unknown hazardous materials sites located on or  
34 in the vicinity of conservation component construction sites. For example, implementing CM2–CM11  
35 for habitat restoration and enhancement purposes could potentially result in effects associated with  
36 agricultural and industrial-type hazardous materials at known sites that are listed on the “Cortese  
37 List.” However, because locations within the eleven conservation zones (described in Chapter 3,  
38 *Description of Alternatives*) for implementing most of the conservation measures have not yet been  
39 determined, it is not known if the conservation measures would be implemented on or near “Cortese  
40 List” sites. Project design would minimize, to the extent feasible, the need to acquire or traverse  
41 areas where the presence of hazardous materials is suspected or has been verified. Implementation  
42 of conservation measures could also involve dredging Delta waterways and other activities that  
43 could disturb contaminated sediments that hold mercury, pesticides, or other constituents.  
44 Concentrations capable of posing hazards or exceeding regulatory thresholds could present a hazard  
45 to the construction workers and any contaminated soil, sediment or groundwater would require

1 proper handling or treatment prior to discharge or disposal. Chapter 8, *Water Quality*, provides  
2 further discussion of these potential contaminants.

3 Other potential hazards that could result from implementing conservation measures involve the  
4 potential for safety hazards related to construction in the vicinity of a public or private airport, and  
5 the potential for wildfire hazards in the vicinity of construction sites. As shown in Figure 24-9 and  
6 Table 24-6, there are 11 airports within the study area. With the exception of the Lost Isle Seaplane  
7 Base, Franklin Field Airport, and Byron Airport, these are private facilities. The Garibaldi Brothers  
8 Airport is located within the Suisun Marsh ROA, just south of Fairfield. Additionally, the Delta Air  
9 Park is proximate to the West Delta ROA east of Oakley. Because locations for some of the habitat  
10 restoration and enhancement activities have not yet been determined, the potential exists for some  
11 of these activities to occur at locations within 2 miles of a private or public airport. High-profile  
12 construction equipment (i.e., 200 feet or taller), such as cranes, could result in potential safety  
13 hazards to aircraft if operated in the vicinity of a runway; however, it is unlikely that this type of  
14 equipment would be employed in the types of habitat restoration, enhancement and protection  
15 activities that would be implemented as part of the conservation measures. As described for Impact  
16 HAZ-4, effects on air safety due to project implementation would be avoided because project  
17 proponents would adhere to all applicable FAA regulations (14 CFR Part 77) and would coordinate  
18 with Caltrans' Division of Aeronautics prior to initiating maintenance activities requiring high-  
19 profile equipment to assess whether a site investigation is necessary. If a site investigation is  
20 performed, project proponents would adhere to Caltrans' recommendations in order to avoid any  
21 adverse effects on air safety. Finally, construction occurring within 10,000 feet of a public airport  
22 may be subject to an OE/AAA to be performed by the FAA. Compliance with the results of the  
23 OE/AAA would reduce the risk for adverse effects on air traffic safety. Potential safety hazards to air  
24 traffic related to the potential for increased bird-aircraft strikes as a result of creating or enhancing  
25 wildlife habitat are discussed under Impact HAZ-8.

26 The potential for conservation component implementation to result in or be subject to substantial  
27 risk of wildfires is possible, but the risk is expected to be low because many of the activities would  
28 be located in or near Delta waterways and adjacent to managed agricultural land. Additionally,  
29 construction activities would be managed using standard construction practices to reduce the  
30 potential for creating wildfires. Precautions would be taken to prevent wildland fires during  
31 construction, and operation and maintenance of the conservation measures would be done in full  
32 compliance with Cal-OSHA standards for fire safety and prevention. Additionally, in an effort to  
33 reduce the potential for fire hazards, the project proponents would develop and implement BMPs  
34 (described under Impact HAZ-5 for this alternative and in Appendix 3B, *Environmental*  
35 *Commitments, AMMs, and CMs*) under an FPCP, in coordination with federal, state, and local agencies,  
36 as part of the environmental commitments.

37 In summary, as described above, implementation of CM2–CM11, CM13, CM14, CM16, CM18 and  
38 CM19 could result in multiple potentially hazardous effects related to the release of or exposure to  
39 hazardous materials or other hazards including increased production, mobilization and  
40 bioavailability of methylmercury; release of existing contaminants (e.g., pesticides in agricultural  
41 land); air safety hazards; and wildfires. These effects, were they to occur, would be considered  
42 adverse. However, this alternative has incorporated environmental commitments (as described  
43 above) to avoid, reduce and/or minimize these potential hazardous effects on the public and the  
44 environment. Further, implementation of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and  
45 TRANS-1a are available to further reduce/minimize many of these potential effects, such that there  
46 would be no adverse effect.

1 **CEQA Conclusion:** A significant impact could occur if Alternative 4 created a substantial hazard to  
 2 the public or the environment through reasonably foreseeable upset and accident conditions  
 3 involving the release of hazardous materials to the environment. The potential for impacts related to  
 4 the release and exposure of workers and the public to hazardous substances or conditions during  
 5 construction, operation, and maintenance of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could  
 6 be significant. Conservation component implementation would involve extensive use of heavy  
 7 equipment during construction, and/or the use and/or transport of hazardous chemicals during  
 8 operations and maintenance (e.g., herbicides for nonnative vegetation control). These chemicals  
 9 could be inadvertently released, exposing construction workers or the public to hazards.  
 10 Construction of restoration projects on or near existing agricultural and industrial land and/or SOCs  
 11 may result in a conflict or exposure to known hazardous materials, and the use of high-profile  
 12 equipment (i.e., 200 feet or higher) in close proximity to airport runways could result in safety  
 13 hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
 14 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and fire prevention and  
 15 fire control BMPs as part of a FPCP, Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-  
 16 1a would be implemented, all of which would ensure that there would be no substantial hazards to  
 17 the public or the environment due to implementation of the conservation measures. As such, this  
 18 impact would be less than significant.

19 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 20 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 21 **Construction Footprint, and Remediate and/or Contain Contamination**

22 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 23 4. Implementation of this mitigation measure will result in the avoidance, successful  
 24 remediation or containment of all known or suspected contaminated areas, as applicable, within  
 25 the construction footprint, which would prevent the release of hazardous materials from these  
 26 areas into the environment.

27 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 28 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 29 **Dispose of Them in Accordance with Applicable Regulations**

30 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 31 4. Implementation of this measure will ensure that hazardous materials present in or associated  
 32 with structures being demolished will not be released into the environment.

33 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

34 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 35 Chapter 20, *Public Services and Utilities*.

36 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 37 **Minimizes Any Effect on Worker and Public Health and Safety**

38 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 39 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
2           **Plan**

3           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
4           1A in Chapter 19, *Transportation*.

5           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
6           **Conservation Measures that Create or Improve Wildlife Habitat**

7           **NEPA Effects:** Implementation of CM2–CM11, measures which would create or improve wildlife  
8           habitat and therefore, potentially attract waterfowl and other birds to areas in proximity to existing  
9           airport flight zones, could increase the opportunity for bird-aircraft strikes, which could result in  
10          impacts on public safety. The following airports, because they are in relatively close proximity  
11          (within 2 miles) to the ROAs and/or conservation zones could potentially be affected: Travis Air  
12          Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International Airport, and  
13          Byron Airport.

14          The FAA funds research and mitigation development, including a bird strike database managed by  
15          the Wildlife Services Program of the U.S. Department of Agriculture under terms of an interagency  
16          agreement. The database currently contains data from January 1990 through August 2008,  
17          recording over 100,000 wildlife strikes. Based on these data, most bird strikes occur during daylight  
18          hours between July and October when aircraft are approaching and landing. Most bird strikes (92%)  
19          occur at or below 3,000 feet altitude. Since 1990, 52 U.S. civil aircraft were either destroyed or  
20          damaged beyond repair due to wildlife strikes, accounting for 23 fatalities. The FAA discourages the  
21          improvement of wildlife habitat in proximity to public-use airports to lessen the risk of bird-aircraft  
22          strikes. If restoration actions are located within 5,000 feet of airports used by propeller-driven  
23          aircraft or within 10,000 feet of those used by jet-driven aircraft (known as the Critical Zone), the  
24          risk of bird-aircraft strikes would likely increase. The FAA recommends that these distances be  
25          maintained between the AOA and land uses deemed incompatible with safe airport operations (i.e.,  
26          hazardous wildlife attractants), including agriculture, water management facilities, and active  
27          wetlands. Public use airports within the study area are located in areas of mixed land uses. Some are  
28          located in proximity to urban uses, but all are located within 5 miles of substantial existing  
29          agricultural lands and wetlands. Thus, all of the public use airports in the study area are currently  
30          located in areas with existing wildlife hazards. The effect of increased bird-aircraft strikes during  
31          implementation of CM2–CM11 would be adverse because it could potentially result in an air and  
32          public safety hazard. Mitigation Measure HAZ-8 would reduce the severity of this effect through the  
33          development and implementation of measures to reduce, minimize and/or avoid wildlife hazards on  
34          air safety. However, this effect is would remain adverse.

35          **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
36          habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
37          flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
38          significant impacts on public safety. Airports that could be potentially affected would include Travis  
39          Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International Airport;  
40          and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact through the  
41          ultimate development of implementation of measures to reduce, minimize and/or avoid wildlife  
42          hazards on air safety, but not to a less-than-significant level. As such, the impact is significant and  
43          unavoidable.

1           **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 2           **Regulatory Agencies**

3           The FAA requires commercial service airports to maintain a safe operation, including  
 4           conducting hazard assessments for wildlife attractants within 5 miles of an airport. The hazard  
 5           assessment is submitted to FAA, which determines if the airport needs to develop a Wildlife  
 6           Hazard Management Plan. (15 CFR Part 139). The airport's Wildlife Hazard Management Plan  
 7           contains measures to reduce wildlife hazards, including habitat modification (e.g., vegetation  
 8           management, filling in of wetlands), wildlife control measures (e.g., harassment, trapping and  
 9           removing), and use of a radar-based alert system.

10          Project proponents will consult with the individual airports and USFWS during the design  
 11          process for individual restoration activities, when site-specific locations and design plans are  
 12          being finalized. At that time, appropriate management plans, strategies, and protocols would be  
 13          developed to reduce, minimize and/or avoid wildlife hazards on air safety. Site-specific  
 14          measures will be developed once information on the design, location, and implementation of  
 15          CM3–CM11 is sufficient to permit a project-level analysis.

16          This mitigation measure will ensure that the potential for increased bird – aircraft strikes as a  
 17          result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 18          extent possible.

19   **24.3.3.10           Alternative 5—Dual Conveyance with Pipeline/Tunnel and**  
 20                           **Intake 1 (3,000 cfs; Operational Scenario C)**

21           **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 22           **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 23           **Conveyance Facilities**

24           *NEPA Effects:* Hazards to the public or the environment through the routine transport, use, or  
 25           disposal of hazardous materials during construction of the water conveyance facilities for Alternative  
 26           5 would be similar to those described under Alternative 1A. Under this alternative, however, only  
 27           Intake 1 would be constructed. Thus, it is anticipated that effects associated with the transport and  
 28           use of fuels for this alternative would be similar, but less severe, than those described for  
 29           Alternative 1A.

30           Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil,  
 31           sediment or groundwater, hazardous constituents present in RTM, infrastructure containing  
 32           hazardous materials, and routine transportation of hazardous materials would be similar to those  
 33           described under Alternative 1A. Because only Intake 1 would be built under this alternative,  
 34           however, implementation would avoid any site-specific contaminants or hazardous materials  
 35           associated with the construction of Intakes 2, 3, 4, and 5.

36           As with Alternative 1A, tunnel construction activities would carry the potential to encounter gases  
 37           that could enter the tunnels and accumulate to flammable or explosive concentrations. The  
 38           construction contractor would be required to prepare an emergency plan prior to construction of  
 39           the tunnels (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9, "Emergency Plan and  
 40           Precautions"). This plan would outline the duties and responsibilities of all employees in the event  
 41           of a fire, explosion or other emergency. The plan would include maps, evacuation plans, rescue

1 procedures, communication protocol, and check-in/check-out procedures. Copies of the plan would  
2 be given to the local fire or designated off-site rescue teams and the Division.

3 Hazardous constituents associated with RTM are not anticipated; however, the possibility exists for  
4 RTM and decanted water to pose a hazard to the construction workers, the public, or the  
5 environment. Additionally, stored bulk quantities of hazardous materials that have been released to  
6 soils and groundwater could be rereleased during construction, also posing a potential hazard.  
7 Water conveyance facilities construction may also require dredging contaminated sediments.  
8 Existing infrastructure, including oil and gas wells, also have the potential to release hazardous  
9 materials, as would the transport of hazardous materials during facility construction. The number of  
10 existing gas and petroleum product pipelines, and transmission lines within the proposed  
11 construction footprint of Alternative 5 would be the same as under Alternative 1A (Table 24-3).  
12 Additionally, under Alternative 5, approximately 123 existing structures are within the construction  
13 footprint, including an estimated 29 residential structures. Other existing structures within the  
14 construction footprint consist primarily of storage or agricultural support facilities (81);  
15 recreational structures (4); and other types of structures (9). These structures may contain  
16 hazardous materials that would require proper handling and disposal, if demolition is necessary. As  
17 described for Impact HAZ-1 under Alternative 1A, Mitigation Measure HAZ-1b would be  
18 implemented by the DWR to ensure that there are no adverse effects related to hazardous materials  
19 from structure demolition.

20 Further, as described for Alternative 1A under Impact HAZ-1, in general, the transportation of  
21 hazardous materials via trucks, trains and ships poses potential risks associated with the accidental  
22 release of these materials to the environment. Rerouting vehicular traffic carrying hazardous  
23 materials during construction of the water conveyance facilities could increase the risk of accidental  
24 release due to inferior road quality or lack of driver familiarity with the modified routes. Hazardous  
25 materials transportation routes are presented in Figure 24-2 and in Table 24-4. Routes anticipated  
26 to be affected during construction of the water conveyance facilities are described in Chapter 19,  
27 *Transportation*. Barges supporting water conveyance facilities construction may also transport  
28 hazardous materials such as fuels and lubricants or other chemicals. The potential exists for  
29 accidental release of hazardous materials from BDCP-related barges. To avoid effects on the  
30 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
31 (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix 3B, *Environmental*  
32 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
33 materials during transport and transfer. Finally, under this alternative, the proposed conveyance  
34 crosses under the existing BNSF/Amtrak San Joaquin line between Bacon Island and Woodward  
35 Island; however, the effect of this crossing would likely be minimal because the conveyance would  
36 traverse the railroad in a deep bore tunnel (see Chapter 19, *Transportation*, for discussion). Further,  
37 the UPRR runs proximate to the construction area of the proposed Byron Tract Forebay; however,  
38 construction is unlikely to disrupt rail service because much of this line has not been in service  
39 recently. Mitigation measures would be in place to ensure that there are no adverse effects on road,  
40 rail, or water transportation, and, thus, the potential for the construction of the water conveyance  
41 facilities to pose risks related to the transportation of hazardous materials would be minimal. As  
42 described in Chapter 19, *Transportation*, under Mitigation Measure TRANS-1a, a site-specific  
43 construction traffic management plan, taking into account hazardous materials transportation,  
44 would be prepared and implemented prior to initiation of construction of water conveyance  
45 facilities. Finally, any potential effects on rail traffic and any hazardous materials transport therein  
46 during construction would be reduced with implementation of Mitigation Measure TRANS-1a, which

1 would include stipulations to coordinate with rail providers to develop alternative interim  
2 transportation modes (e.g., trucks or buses) that could be used to provide freight and/or passenger  
3 service during any longer term railroad closures and daily construction time windows during which  
4 construction would be restricted or rail operations would need to be suspended for any activity  
5 within railroad rights of way. This would minimize the potential risk of release of hazardous  
6 materials being transported via these rails (see Chapter 19, *Transportation*, for a description).

7 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would minimize, to  
8 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
9 is suspected or has been verified. Further, environmental commitments would be implemented,  
10 including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical  
11 characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. The  
12 environmental commitments would reduce these potential hazards associated with water  
13 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
14 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
15 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact.  
16 As such, construction of the water conveyance facilities would not create a substantial hazard to the  
17 public or the environment through the routine transport, use, or disposal of hazardous materials or  
18 the upset/accidental release of these materials. Thus, this effect would not be adverse.

19 **CEQA Conclusion:** Similar to Alternative 1A, construction of the water conveyance facilities under  
20 Alternative 5 presents the potential for a direct significant impact on construction personnel, the  
21 public and/or the environment associated with a variety of physical and chemical hazardous  
22 conditions because of the intensity of construction activities at the north Delta intakes, forebays and  
23 conveyance pipelines and tunnels and the hazardous materials that would be needed in these areas  
24 during construction. Potential hazards include the routine use of hazardous materials (as defined by  
25 Title 22 of the California Code of Regulations, Division 4.5); natural gas accumulation in water  
26 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment and  
27 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
28 electrical transmission lines; and hazardous constituents present in RTM. Under this alternative,  
29 however, only Intake 1 would be constructed. Thus, it is anticipated that effects associated with the  
30 transport and use of fuels for this alternative would be similar, but less severe, than those described  
31 for Alternative 1A.

32 Many of these physical and chemical hazardous conditions would occur in close proximity to the  
33 town of Courtland during construction of the intermediate forebay. Additionally, the potential would  
34 exist for the construction of the water conveyance facilities to indirectly result in the release of  
35 hazardous materials through the disruption of existing road, rail, or river hazardous materials  
36 transport routes because construction would occur in the vicinity of three hazardous material  
37 transport routes, three railroad corridors, and waterways with barge traffic and would require  
38 construction traffic that could disrupt these routes. For these reasons, this is considered a significant  
39 impact. However, with the implementation of the previously described environmental commitments  
40 (e.g., SWPPPs, HMMPs, SPCCPs, SAPs, and a Barge Operations Plan) and Mitigation Measures HAZ-1a  
41 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
42 (described in Chapter 19, *Transportation*), construction of the water conveyance facilities would not  
43 create a substantial hazard to the public or the environment through the routine transport, use, or  
44 disposal of hazardous materials or the upset/accidental release of these materials. As such, these  
45 impacts would be less than significant.

1           **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2           **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3           **Construction Footprint, and Remediate and/or Contain Contamination**

4           Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5           1A.

6           **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7           **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8           **Dispose of Them in Accordance with Applicable Regulations**

9           Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10          1A.

11          **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12          Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13          Chapter 20, *Public Services and Utilities*.

14          **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15          **Minimizes Any Effect on Worker and Public Health and Safety**

16          Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17          Chapter 20, *Public Services and Utilities*.

18          **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19          **Plan**

20          Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21          1A in Chapter 19, *Transportation*.

22          **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 23          **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 24          **Facilities**

25          **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
 26          an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
 27          pose a health hazard. However, no schools, parks or hospitals are located within 0.25 mile of  
 28          Alternative 5. Therefore, no sensitive receptors would be exposed to hazardous materials,  
 29          substances, or waste during construction of the water conveyance facilities under Alternative 5. As  
 30          such, there would be no effect. Potential air quality effects on sensitive receptors are discussed in  
 31          Chapter 22, *Air Quality and Greenhouse Gases*.

32          **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
 33          Alternative 5 water conveyance facilities alignment, therefore, there would be no impact due to  
 34          exposure of sensitive receptors to hazardous materials, substances or waste during construction of  
 35          the water conveyance facilities. Accordingly, there would be no impact. No mitigation is required.  
 36          Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
 37          *Greenhouse Gases*.

1 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 2 **Create a Significant Hazard to the Public or the Environment**

3 **NEPA Effects:** There are no “Cortese List” sites or known SOCs within the construction footprint of  
 4 Alternative 5 (Table 24-5 and Figure 24-4), and therefore there would be no conflict pertaining to a  
 5 known hazardous materials site during construction of the water conveyance facilities, and thus, no  
 6 related hazard to the public or the environment. For those hazardous materials sites identified  
 7 within the 0.5-mile radius but which are not within the construction footprint, there would be no  
 8 potential for construction of the water conveyance facilities to disturb those sites such that there  
 9 would be a re-release of hazardous materials that would create a hazard for the public or  
 10 environment. As such, there would be no effect. The potential for encountering unknown hazardous  
 11 materials sites during the course of construction is discussed under Impact HAZ-1.

12 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
 13 conveyance facility under this alternative, there would be no conflict with known hazardous  
 14 materials sites during construction of the water conveyance facilities, and therefore, no related  
 15 hazard to the public or the environment. As such, there would be no impact. No mitigation is  
 16 required. The potential for encountering unknown hazardous materials sites during the course of  
 17 construction is discussed under Impact HAZ-1.

18 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 19 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 20 **Study Area during Construction of the Water Conveyance Facilities**

21 **NEPA Effects:** Safety hazards to aircraft posed by high-profile construction equipment, such as  
 22 cranes and pile drivers, or structures (e.g., proposed transmission lines and towers), would be the  
 23 same as those described under Alternative 1A. Because the Borges-Clarksburg, Spezia and Walnut  
 24 Grove Airports (private air facilities) and the Byron Airport (a public air facility) would be located  
 25 within 2 miles of project features within the construction footprint that may require not only the use  
 26 of high-profile (200 feet or taller) construction equipment but also the use of helicopters (stringing  
 27 of a proposed permanent 230-kV transmission line), there could be potential effects on air safety.

28 However, as required, DWR would inform Caltrans’ Division of Aeronautics in writing prior to  
 29 construction and would adhere to any recommendations resulting from Caltrans’ site investigations,  
 30 which would ensure that there are no adverse effects on air safety. Further, DWR would comply with  
 31 the recommendations of the OE/AAA (for Byron Airport) (14 CFR Part 77), as described under  
 32 Impact HAZ-4 under Alternative 1A. These actions would ensure that there are no adverse effects on  
 33 air safety.

34 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 35 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 36 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
 37 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
 38 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
 39 is operated too close to runways. Three private airports (Borges-Clarksburg, Spezia, and Walnut  
 40 Grove Airports) and one public airport (Byron Airport) are located within 2 miles of the  
 41 construction footprint of Alternative 5. DWR would coordinate with Caltrans’ Division of  
 42 Aeronautics prior to initiating construction and comply with its recommendations based on its  
 43 investigation(s), as well comply with the recommendations of the OE/AAA (for Byron Airport).  
 44 Compliance with these recommendations, which could include limitations necessary to minimize

1 potential problems, such as the use of temporary construction equipment, supplemental notice  
 2 requirements, and marking and lighting high-profile structures would reduce the potential for  
 3 impacts on air safety. Accordingly, impacts on air safety would be less than significant. No mitigation  
 4 is required.

5 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 6 **Injury or Death Involving Wildland Fires, Including Where Wildlands Aare Adjacent to**  
 7 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 8 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

9 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 10 Alternative 1A. The northernmost and southernmost extent of this conveyance alignment would be  
 11 adjacent to zones of moderate fire hazard severity.

12 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 13 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 14 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire  
 15 safety and prevention. Additionally, DWR would develop and implement fire prevention, safety and  
 16 control measures as part of a FPCP in coordination with federal, state, and local agencies.  
 17 Implementation of these would help ensure that people or structures would not be subject to a  
 18 significant risk of loss, injury or death involving wildland fires. Therefore, this impact would not be  
 19 adverse.

20 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 21 death involving wildland fires during construction or operation and maintenance of the water  
 22 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and  
 23 safety standards; DWR would implement standard fire safety and prevention measures, as part of a  
 24 FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
 25 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
 26 Therefore, this impact would be less than significant. No mitigation is required.

27 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 28 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 29 **Water Conveyance Facilities**

30 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 31 conveyance facilities would be similar to those described for Alternative 1A. Under this alternative,  
 32 however, the potential for hazards associated with intake pumping plants and sediment basins  
 33 would be less widespread, as only one intake facility would be operated and maintained.  
 34 Nonetheless, this alternative may require the transport, storage, and use of chemicals or hazardous  
 35 waste materials including fuel, oils, grease, solvents, and paints. Solids collected at solids lagoons  
 36 and sediment dredged during intake maintenance may contain hazardous constituents (e.g.,  
 37 persistent pesticides, mercury, PCBs). To ensure that potentially contaminated sediment from  
 38 maintenance dredging activities at the intakes would not adversely affect soil, groundwater or  
 39 surface water, a SAP would be implemented prior to any dredging activities, as described under  
 40 Impact HAZ-1 for this alternative. All sediment would be characterized chemically prior to reuse to  
 41 ensure that reuse of this material would not result in a hazard to the public or the environment.

42 The locations of airports with respect to the pipeline/tunnel alignment are provided in Figure 24-9.  
 43 The Borges-Clarksburg, Walnut Grove, and Spezia Airports (all private air facilities) and the Byron

1 Airport (a public air facility) would be located within 2 miles of the Alternative 5 construction  
2 footprint (Figure 24-9 and Table 24-6). With the exception of power transmission lines supplying  
3 power to pumps, surge towers, and other equipment used for water conveyance facilities operation  
4 and maintenance, water conveyance facilities operations and maintenance are not anticipated to  
5 require high-profile equipment, the use of which near an airport runway could result in an adverse  
6 effect on aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and  
7 coordinate with Caltrans' Division of Aeronautics prior to initiating maintenance activities requiring  
8 high-profile equipment to avoid adverse effects on air safety. Compliance with these  
9 recommendations, which could include limitations necessary to minimize potential problems, such  
10 as the use of temporary construction equipment, supplemental notice requirements, and marking  
11 and lighting high-profile structures would reduce the potential for impacts on air safety.

12 There are no sensitive receptors (i.e., schools, hospitals and parks) located within 0.25 mile of  
13 Alternative 5.

14 Because the types of potentially hazardous materials used during routine operation and  
15 maintenance activities would be used in relatively small quantities, and because BMPs, as would be  
16 implemented in the SWPPPs, SPCCPs, and HMMPs, would be in place to help prevent the inadvertent  
17 release of these materials and to contain and remediate spills should they occur, the risk to the  
18 public and environment would be negligible. Improper disposal of potentially contaminated (e.g.,  
19 persistent pesticides and mercury) lagoon solids could result in contamination of soil, groundwater  
20 and surface water, which would be considered an adverse effect. With implementation of Mitigation  
21 Measure HAZ-6, solids from the solids lagoons would be sampled and characterized to evaluate  
22 disposal options, and disposed of accordingly at an appropriate, licensed facility in order to avoid  
23 adverse effects on the environment from potential contamination.

24 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
25 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
26 substantial hazard to the public or the environment and, accordingly, there would be no adverse  
27 effect.

28 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
29 operation and maintenance of the water conveyance facilities and the potential interference with air  
30 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
31 could have impacts on the public and environment. However, implementation of the BMPs and other  
32 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
33 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
34 when performing work with high-profile equipment within 2 miles of an airport, which would  
35 include implementation of recommendations to provide supplemental notice and/or equip high-  
36 profile structures with marking and lighting, would ensure that operation and maintenance of the  
37 water conveyance facilities would not create a substantial hazard to the public, environment or air  
38 traffic safety. Improper disposal of potentially contaminated (e.g., persistent pesticides and  
39 mercury) lagoon solids could result in contamination of soil, groundwater and surface water, which  
40 would be considered a significant impact. With implementation of Mitigation Measure HAZ-6, solids  
41 from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
42 disposed of accordingly at an appropriate, licensed facility in order to avoid a significant impact on  
43 the environment from potential contamination.

1 Therefore, with implementation of BMPs as part of environmental commitments and with  
 2 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
 3 facilities would not create a substantial hazard to the public or the environment. Accordingly, this  
 4 impact would be less than significant.

5 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 6 **and/or Disposal**

7 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
 8 1A.

9 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 10 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 11 **CM13, CM14, CM16, CM18 and CM19**

12 *NEPA Effects:* The potential for construction, operation, and maintenance activities associated with  
 13 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 14 workers, the public, and the environment would be similar to those described under Alternative 1A.  
 15 Effects related to tidal habitat restoration, however, would be less widespread under this  
 16 alternative, because the target area for restoration under this alternative is limited to approximately  
 17 25,000 acres. Hazardous materials associated with the operation of construction equipment could  
 18 be released into the environment in the course of the materials' routine transport, use, or disposal.  
 19 Releases could also occur as a result of accidental circumstances. Similarly, construction activities  
 20 could encounter known or unknown hazardous materials sites located on or in the vicinity of  
 21 construction sites, creating the potential for their disturbance and release. Other activities, including  
 22 the intentional demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material  
 23 and/or RTM, would also present the potential to generate hazards or release hazardous materials.  
 24 However, prior to the reuse of spoils, dredged material or RTM, these materials would undergo  
 25 chemical characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and*  
 26 *CMs*, to ensure that they are not creating a hazard to the public and environment.

27 Further, other potential hazards that could result from implementing conservation measures  
 28 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
 29 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
 30 release of hazardous substances during operation and maintenance (e.g., herbicides for nonnative  
 31 vegetation control); the release, in the short-term, of pesticides from former agricultural lands as a  
 32 result of wetland and floodplain restoration; the potential for safety hazards related to construction  
 33 in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of construction  
 34 sites.

35 These potential effects, were they to occur, would be considered adverse. However, the proposed  
 36 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
 37 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
 38 suspected or has been verified. Additionally, with implementation of Mitigation Measures HAZ-1a,  
 39 HAZ-1b, UT-6a, UT-6c, TRANS-1a, and environmental commitments (discussed previously for  
 40 Impacts HAZ-1 through HAZ-6, and in detail in Appendix 3B, *Environmental Commitments, AMMs,*  
 41 *and CMs*), the potential for substantial hazards to the public or environment would be reduced and,  
 42 accordingly, there would be no adverse effect.

1 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
2 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

3 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
4 public to hazardous substances or conditions during construction, operation, and maintenance of  
5 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation measures  
6 implementation would involve extensive use of heavy equipment during construction, and/or the  
7 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
8 for nonnative vegetation control). These chemicals could be inadvertently released, exposing  
9 construction workers or the public to hazards. Construction of restoration projects on or near  
10 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
11 materials, and the use of high-profile equipment in close proximity to airport runways could result  
12 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
13 However, in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
14 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
15 ensure that these potential impacts would be less than significant.

16 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
17 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
18 **Construction Footprint, and Remediate and/or Contain Contamination**

19 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
20 1A.

21 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
22 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
23 **Dispose of Them in Accordance with Applicable Regulations**

24 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
25 1A.

26 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

27 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
28 Chapter 20, *Public Services and Utilities*.

29 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
30 **Minimizes Any Effect on Worker and Public Health and Safety**

31 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
32 Chapter 20, *Public Services and Utilities*.

33 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
34 **Plan**

35 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
36 1A in Chapter 19, *Transportation*.

1 **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 2 **Conservation Measures that Create or Improve Wildlife Habitat**

3 **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 4 wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 5 strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 6 from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 7 areas for restoration activities based on the location of the physical water conveyance features  
 8 associated with each alternative. Such variation may result greater or less opportunity for bird-  
 9 aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 10 because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 11 zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 12 Airport; Sacramento International Airport, and Byron Airport.

13 The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 14 because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 15 would reduce the severity of this effect through the development and implementation of measures  
 16 to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 17 adverse.

18 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 19 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 20 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 21 significant impacts on public safety. The following airports, because they are in relatively close  
 22 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 23 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 24 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 25 through the ultimate development and implementation of measures to reduce, minimize and/or  
 26 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 27 significant and unavoidable.

28 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 29 **Regulatory Agencies**

30 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 31 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 32 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 33 extent possible.

34 **24.3.3.11 Alternative 6A—Isolated Conveyance with Pipeline/Tunnel and**  
 35 **Intakes 1–5 (15,000 cfs; Operational Scenario D)**

36 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 37 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 38 **Conveyance Facilities**

39 **NEPA Effects:** Potential hazards to the public or the environment through the routine transport, use,  
 40 or disposal of hazardous materials during construction of the water conveyance facilities for  
 41 Alternative 6A would be the same as those described under Alternative 1A. Similarly, potential  
 42 hazards associated with natural gas accumulation in tunnels, existing contaminants in soil, sediment

1 or groundwater, hazardous constituents present in RTM, infrastructure containing hazardous  
2 materials, and routine transportation of hazardous materials would also be the same as under  
3 Alternative 1A.

4 As with Alternative 1A, tunnel construction activities would carry the potential to encounter gases  
5 that could enter the tunnels and accumulate to flammable or explosive concentrations. The  
6 construction contractor would be required to prepare an emergency plan prior to construction of  
7 the tunnels (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9, "Emergency Plan and  
8 Precautions"). This plan would outline the duties and responsibilities of all employees in the event  
9 of a fire, explosion or other emergency. The plan would include maps, evacuation plans, rescue  
10 procedures, communication protocol, and check-in/check-out procedures. Copies of the plan would  
11 be given to the local fire or designated off-site rescue teams and the Division.

12 Hazardous constituents associated with RTM are not anticipated; however, the possibility exists for  
13 RTM and decanted water to pose a hazard to the construction workers, the public, or the  
14 environment. Additionally, stored bulk quantities of hazardous materials that have been released to  
15 soils and groundwater could be rereleased during construction, also posing a potential hazard.  
16 Water conveyance facilities construction may also require dredging contaminated sediments.  
17 Existing infrastructure, including oil and gas wells, also have the potential to release hazardous  
18 materials, as would the transport of hazardous materials during facility construction. The number of  
19 existing gas and petroleum product pipelines, and transmission lines within the proposed  
20 construction footprint of Alternative 5 would be the same as under Alternative 1A.

21 Approximately 204 permanent structures would be removed or relocated within the water  
22 conveyance facility footprint under this alternative. This includes approximately 59 residential  
23 buildings; 15 recreational structures; 120 storage and agricultural support structures; and 10 other  
24 types of structures (e.g., power/utility structures, bridges, and other infrastructure). One fire station  
25 in the community of Hood would also be affected. Most of these structures occur within the physical  
26 footprints of the intake facilities and their associated conveyance pipelines. These structures may  
27 contain hazardous materials in the form of building materials containing asbestos or lead-based  
28 paint, stored liquid paints and solvents, and household or industrial-strength maintenance  
29 chemicals and cleaners. These materials would require proper handling and disposal. As described  
30 for Impact HAZ-1 under Alternative 1A, Mitigation Measure HAZ-1b would be implemented by DWR  
31 to ensure that there are no adverse effects related to hazardous materials from structure demolition.

32 Further, as described for Alternative 1A under Impact HAZ-1, in general, the transportation of  
33 hazardous materials via trucks, trains and ships poses potential risks associated with the accidental  
34 release of these materials to the environment. Rerouting vehicular traffic carrying hazardous  
35 materials during construction of the water conveyance facilities could increase the risk of accidental  
36 release due to inferior road quality or lack of driver familiarity with the modified routes. Hazardous  
37 materials transportation routes are presented in Figure 24-2 and in Table 24-4. Routes anticipated  
38 to be affected during construction of the water conveyance facilities are described in Chapter 19,  
39 *Transportation*. Barges supporting water conveyance facilities construction may also transport  
40 hazardous materials such as fuels and lubricants or other chemicals. The potential exists for  
41 accidental release of hazardous materials from BDCP-related barges. To avoid effects on the  
42 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
43 (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix 3B, *Environmental*  
44 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
45 materials during transport and transfer. Finally, under this alternative, the proposed conveyance

1 crosses under the existing BNSF/Amtrak San Joaquin line between Bacon Island and Woodward  
2 Island; however, the effect of this crossing would likely be minimal because the proposed  
3 conveyance would traverse the railroad in a deep bore tunnel (see Chapter 19, *Transportation*, for  
4 discussion). Further, the UPRR runs proximate to the construction area of the proposed Byron  
5 Forebay; however, construction is unlikely to disrupt rail service because much of this line has not  
6 been in service recently.

7 As described under Impact HAZ-1 for Alternative 1A, mitigation measures would be in place to  
8 ensure that there are no adverse effects on road, rail, or water transportation, and, thus, the  
9 potential for the construction of the water conveyance facilities to pose risks related to the  
10 transportation of hazardous materials would be minimal. As described in Chapter 19,  
11 *Transportation*, under Mitigation Measure TRANS-1a, a site-specific construction traffic  
12 management plan, taking into account hazardous materials transportation, would be prepared and  
13 implemented prior to initiation of construction of water conveyance facilities. Any potential effects  
14 on rail traffic and any hazardous materials transport therein during construction would be reduced  
15 with implementation of Mitigation Measure TRANS-1a, which would include stipulations to  
16 coordinate with rail providers to develop alternative interim transportation modes (e.g., trucks or  
17 buses) that could be used to provide freight and/or passenger service during any longer term  
18 railroad closures and daily construction time windows during which construction would be  
19 restricted or rail operations would need to be suspended for any activity within railroad rights of  
20 way. This would minimize the potential risk of release of hazardous materials being transported via  
21 these rails. As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would  
22 minimize, to the extent feasible, the need to acquire or traverse areas where the presence of  
23 hazardous materials is suspected or has been verified. Further, environmental commitments would  
24 be implemented, including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and  
25 chemical characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. The  
26 environmental commitments would reduce these potential hazards associated with water  
27 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
28 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
29 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact.  
30 As such, construction of the water conveyance facilities would not create a substantial hazard to the  
31 public or the environment through the routine transport, use, or disposal of hazardous materials or  
32 the upset/accidental release of these materials. Thus, this effect would not be adverse.

33 **CEQA Conclusion:** During construction of the water conveyance facilities the potential would exist  
34 for direct significant impacts on construction personnel, the public and/or the environment  
35 associated with the routine use of hazardous materials; natural gas accumulation in water  
36 conveyance tunnels; the inadvertent release of existing contaminants in soil, groundwater, and  
37 sediment, or hazardous materials in existing infrastructure to be removed; disturbance of electrical  
38 transmission lines; and hazardous constituents present in RTM. Additionally, there is the potential  
39 for the construction of the proposed water conveyance facility to indirectly result in the release of  
40 hazardous materials through the disruption of existing road, rail, and or river hazardous materials  
41 transport routes, which, were this to occur, would be considered a significant impact. However, with  
42 the implementation of the previously described environmental commitments and Mitigation  
43 Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and*  
44 *Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the water  
45 conveyance facilities would not create a substantial hazard to the public or the environment through

1 the routine transport, use, or disposal of hazardous materials or the upset/accidental release of  
2 these materials. As such, these impacts would be less than significant.

3 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
4 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
5 **Construction Footprint, and Remediate and/or Contain Contamination**

6 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
7 1A.

8 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
9 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
10 **Dispose of Them in Accordance with Applicable Regulations**

11 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
12 1A.

13 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

14 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
15 Chapter 20, *Public Services and Utilities*.

16 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
17 **Minimizes Any Effect on Worker and Public Health and Safety**

18 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
19 Chapter 20, *Public Services and Utilities*.

20 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
21 **Plan**

22 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
23 1A in Chapter 19, *Transportation*.

24 **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
25 **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
26 **Facilities**

27 **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
28 an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
29 pose a health hazard. However, no schools, parks or hospitals are located within 0.25 mile of  
30 Alternative 6A. Therefore, no sensitive receptors would be exposed to hazardous materials,  
31 substances, or waste during construction of the water conveyance facilities under Alternative 6A. As  
32 such, there would be no effect. Potential air quality effects on sensitive receptors are discussed in  
33 Chapter 22, *Air Quality and Greenhouse Gases*.

34 **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
35 Alternative 6A water conveyance facilities alignment, therefore, there would be no impact due to  
36 exposure of sensitive receptors to hazardous materials, substances or waste during construction of  
37 the water conveyance facilities. Accordingly, there would be no impact. No mitigation is required.

1 Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
2 *Greenhouse Gases*.

3 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
4 **Create a Significant Hazard to the Public or the Environment**

5 **NEPA Effects:** There are no “Cortese List” sites or known SOCs within the construction footprint of  
6 Alternative 6A (Table 24-5 and Figure 24-4), and therefore there would be no conflict pertaining to  
7 a known hazardous materials site during construction of the water conveyance facilities, and thus,  
8 no related hazard to the public or the environment.). For those hazardous materials sites identified  
9 within the 0.5-mile radius but which are not within the construction footprint, there would be no  
10 potential for construction of the water conveyance facilities to disturb those sites such that there  
11 would be a re-release of hazardous materials that would create a hazard for the public or  
12 environment. Therefore, the potential for hazards associated with existing SOCs is assumed to be  
13 minimal, and as such, there would be no effect. The potential for encountering unknown hazardous  
14 materials sites during the course of construction is discussed under Impact HAZ-1.

15 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
16 conveyance facility under this alternative, there would be no conflict with known hazardous  
17 materials sites during construction of the water conveyance facilities, and therefore, no related  
18 hazard to the public or the environment. As such, there would be no impact. The potential for  
19 encountering unknown hazardous materials sites during the course of construction is discussed  
20 under Impact HAZ-1.

21 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
22 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
23 **Study Area during Construction of the Water Conveyance Facilities**

24 **NEPA Effects:** Safety hazards to aircraft posed by high-profile construction equipment, such as  
25 cranes and pile drivers, or structures (e.g., proposed transmission lines and towers), would be the  
26 same as those described under Alternative 1A. Because the Borges-Clarksburg, Spezia and Walnut  
27 Grove Airports (private air facilities) and the Byron Airport (a public air facility) would be located  
28 within 2 miles of project features within the construction footprint that may require not only the use  
29 of high-profile (200 feet or taller) construction equipment but also the use of helicopters (stringing  
30 of a proposed permanent 230-kV transmission line), there could be potential effects on air safety.

31 However, as required, project proponents would inform Caltrans’ Division of Aeronautics in writing  
32 prior to construction and would adhere to any recommendations resulting from Caltrans’ site  
33 investigations, which would ensure that there are no adverse effects on air safety. Further, the  
34 project proponents would comply with the recommendations of the OE/AAA (for Byron Airport) (14  
35 CFR Part 77), as described under Impact HAZ-4 under Alternative 1A. These actions would ensure  
36 that there are no adverse effects on air safety.

37 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
38 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
39 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
40 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
41 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
42 is operated too close to runways. Three private airports (Borges-Clarksburg, Spezia, and Walnut  
43 Grove Airports) and one public airport (Byron Airport) are located within 2 miles of the

1 construction footprint of Alternative 6A. DWR would coordinate with Caltrans' Division of  
 2 Aeronautics prior to initiating construction and comply with its recommendations based on its  
 3 investigation(s), as well comply with the recommendations of the OE/AAA (for Byron Airport).  
 4 Compliance with these recommendations, which could include limitations necessary to minimize  
 5 potential problems, such as the use of temporary construction equipment, supplemental notice  
 6 requirements, and marking and lighting high-profile structures would reduce the potential for  
 7 impacts on air safety. Accordingly, impacts on air safety would be less than significant. No mitigation  
 8 is required.

9 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 10 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 11 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 12 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

13 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 14 Alternative 1A. The northernmost and southernmost extent of this conveyance alignment would be  
 15 adjacent to zones of moderate fire hazard severity.

16 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 17 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 18 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire  
 19 safety and prevention. Additionally, DWR would develop and implement fire safety, prevention and  
 20 control BMPs as part of a FPCP in coordination with federal, state, and local agencies.  
 21 Implementation of these would help ensure that people or structures would not be subject to a  
 22 significant risk of loss, injury or death involving wildland fires. Therefore, this effect would not be  
 23 adverse.

24 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 25 death involving wildland fires during construction or operation and maintenance of the water  
 26 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and  
 27 safety standards; DWR would implement standard fire safety and prevention measures, as part of a  
 28 FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
 29 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
 30 Therefore, this impact would be less than significant. No mitigation is required.

31 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 32 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 33 **Water Conveyance Facilities**

34 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 35 conveyance facilities would be similar to those described for Alternative 1A. Under this alternative,  
 36 however, the potential for hazards associated with intake pumping plants and sediment basins  
 37 could be greater, based upon heavier and more frequent use of north Delta intakes under isolated  
 38 operational guidelines. This alternative may require the transport, storage, and use of chemicals or  
 39 hazardous waste materials including fuel, oils, grease, solvents, and paints. Because the types of  
 40 potentially hazardous materials used during routine operation and maintenance activities would be  
 41 used in relatively small quantities, and because BMPs, as would be implemented in the SWPPPs,  
 42 SPCCPs, and HMMPs, would be in place to help prevent the inadvertent release of these materials

1 and to contain and remediate spills should they occur, the risk to the public and environment would  
2 be negligible.

3 Solids collected at solids lagoons and sediment dredged during intake maintenance may contain  
4 hazardous constituents (e.g., persistent pesticides, mercury, PCBs). To ensure that potentially  
5 contaminated sediment from maintenance dredging activities at the intakes would not adversely  
6 affect soil, groundwater or surface water, a SAP would be implemented prior to any dredging  
7 activities, as described under Impact HAZ-1 for this alternative. All sediment would be characterized  
8 chemically prior to reuse to ensure that reuse of this material would not result in a hazard to the  
9 public or the environment. Improper disposal of potentially contaminated (e.g., persistent pesticides  
10 and mercury) lagoon solids could result in contamination of soil, groundwater and surface water,  
11 which would be considered an adverse effect. With implementation of Mitigation Measure HAZ-6,  
12 solids from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
13 disposed of accordingly at an appropriate, licensed facility in order to avoid adverse effects on the  
14 environment from potential contamination.

15 The locations of airports with respect to the pipeline/tunnel alignment are provided in Figure 24-9.  
16 The Borges-Clarksburg, Walnut Grove, and Spezia Airports (all private facilities), and Byron Airport  
17 (a public facility) would be located within 2 miles of the Alternative 6A construction footprint  
18 (Figure 24-9 and Table 24-6). With the exception of power transmission lines supplying power to  
19 pumps, surge towers, and other water conveyance facilities equipment, water conveyance facilities  
20 operations and maintenance are not anticipated to require high-profile equipment, the use of which  
21 near an airport runway could result in an adverse effect on aircraft. DWR would comply with  
22 recommendations of an OE/AAA (for Byron Airport), and would coordinate with Caltrans' Division  
23 of Aeronautics prior to initiating maintenance activities requiring high-profile equipment to avoid  
24 adverse effects on air safety. Compliance with these recommendations, which could include  
25 limitations necessary to minimize potential problems, such as the use of temporary construction  
26 equipment, supplemental notice requirements, and marking and lighting high-profile structures  
27 would reduce the potential for impacts on air safety.

28 Potential releases of hazardous materials could result in an adverse effect on workers, the public  
29 (including sensitive receptors within 0.25 mile of the water conveyance facilities). There are no  
30 sensitive receptors (i.e., schools, hospitals and parks) located within 0.25 mile of Alternative 6A.

31 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
32 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
33 substantial hazard to the public or the environment and, accordingly, there would be no adverse  
34 effect.

35 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
36 operation and maintenance of the water conveyance facilities and the potential interference with air  
37 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
38 could have impacts on the public and environment. However, implementation of the BMPs and other  
39 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
40 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
41 when performing work with high-profile equipment within 2 miles of an airport, which would  
42 include implementation of recommendations to provide supplemental notice and/or equip high-  
43 profile structures with marking and lighting, would ensure that operation and maintenance of the  
44 water conveyance facilities would not create a substantial hazard to the public, environment or air

1 traffic safety. Improper disposal of potentially contaminated (e.g., persistent pesticides and  
 2 mercury) lagoon solids could result in contamination of soil, groundwater and surface water, which  
 3 would be considered a significant impact. However, with implementation of Mitigation Measure  
 4 HAZ-6, solids from the solids lagoons would be sampled and characterized to evaluate disposal  
 5 options, and disposed of accordingly at an appropriate, licensed facility in order to avoid a  
 6 significant impact on the environment from potential contamination.

7 Therefore, with implementation of BMPs as part of environmental commitments and with  
 8 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
 9 facilities would not create a substantial hazard to the public or the environment and, accordingly,  
 10 this impact would be less than significant.

11 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 12 **and/or Disposal**

13 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
 14 1A.

15 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 16 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 17 **CM13, CM14, CM16, CM18 and CM19**

18 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 19 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 20 workers, the public, and the environment would be similar to those described under Alternative 1A.  
 21 Hazardous materials associated with the operation of construction equipment could be released into  
 22 the environment in the course of the materials' routine transport, use, or disposal. Releases could  
 23 also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
 24 known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
 25 creating the potential for their disturbance and release. Other activities, including the intentional  
 26 demolition of existing structures and reuse of spoil, dredged material and/or RTM, would also  
 27 present the potential to generate hazards or release hazardous materials. However, prior to the  
 28 reuse of spoils, dredged material or RTM, these materials would undergo chemical characterization,  
 29 as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, to ensure that they are  
 30 not creating a hazard to the public and environment.

31 Further, other potential hazards that could result from implementing conservation measures  
 32 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
 33 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
 34 release of hazardous substances during operation and maintenance (e.g., herbicides for nonnative  
 35 vegetation control); the release, in the short-term, of pesticides from former agricultural lands as a  
 36 result of wetland and floodplain restoration; the potential for safety hazards related to construction  
 37 in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of construction  
 38 sites.

39 These potential effects, were they to occur, would be considered adverse. However, the proposed  
 40 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
 41 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
 42 suspected or has been verified. Additionally, with implementation of Mitigation Measures HAZ-1a,  
 43 HAZ-1b, UT-6a, UT-6c, TRANS-1a, and environmental commitments (discussed previously for

1 Impacts HAZ-1 through HAZ-6 under Alternative 1A, and in detail in Appendix 3B, *Environmental*  
 2 *Commitments, AMMs, and CMs*), the potential for substantial hazards to the public or environment  
 3 would be reduced and, accordingly, there would be no adverse effect.

4 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
 5 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

6 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
 7 public to hazardous substances or conditions during construction, operation, and maintenance of  
 8 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 9 implementation would involve extensive use of heavy equipment during construction, and/or the  
 10 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 11 for nonnative vegetation control). These chemicals could be inadvertently released and could expose  
 12 construction workers or the public to hazards. Construction of restoration projects on or near  
 13 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 14 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 15 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
 16 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
 17 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
 18 ensure that these potential impacts would be less than significant.

19 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 20 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 21 **Construction Footprint, and Remediate and/or Contain Contamination**

22 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 23 1A.

24 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 25 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 26 **Dispose of Them in Accordance with Applicable Regulations**

27 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 28 1A.

29 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

30 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 31 Chapter 20, *Public Services and Utilities*.

32 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 33 **Minimizes Any Effect on Worker and Public Health and Safety**

34 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 35 Chapter 20, *Public Services and Utilities*.

36 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 37 **Plan**

38 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 39 1A in Chapter 19, *Transportation*.

1 **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 2 **Conservation Measures that Create or Improve Wildlife Habitat**

3 **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 4 wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 5 strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 6 from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 7 areas for restoration activities based on the location of the physical water conveyance features  
 8 associated with each alternative. Such variation may result greater or less opportunity for bird-  
 9 aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 10 because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 11 zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 12 Airport; Sacramento International Airport, and Byron Airport.

13 The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 14 because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 15 would reduce the severity of this effect through the development and implementation of measures  
 16 to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 17 adverse.

18 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 19 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 20 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 21 significant impacts on public safety. The following airports, because they are in relatively close  
 22 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 23 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 24 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 25 through the ultimate development and implementation of measures to reduce, minimize and/or  
 26 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 27 significant and unavoidable.

28 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 29 **Regulatory Agencies**

30 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 31 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 32 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 33 extent possible.

34 **24.3.3.12 Alternative 6B—Isolated Conveyance with East Alignment and**  
 35 **Intakes 1–5 (15,000 cfs; Operational Scenario D)**

36 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 37 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 38 **Conveyance Facilities**

39 **NEPA Effects:** Hazards to the public or the environment through the routine transport, use, or  
 40 disposal of hazardous materials during construction of the water conveyance facilities for Alternative  
 41 6B would be the same as those described under Alternative 1B.

1 As described in Chapter 3, *Description of Alternatives*, during construction of Alternative 1B six  
2 locations would be designated as temporary fuel stations. Each fuel station would occupy two acres  
3 and each would be located adjacent to a concrete batch plant. Fuel station locations are shown in  
4 Figure 24-7. Fuel stations would be established in currently rural areas with two at the intakes on  
5 the northern end of the conveyance alignment, three along the length of the canal alignment and one  
6 fuel station would be near the pumping facilities on the southern end. Bulk fuel would be stored at  
7 fuel stations and potentially pose the risk of vehicle fuel spills and leakage from above-ground  
8 storage tanks at fuel stations.

9 Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil,  
10 river sediment or groundwater, hazardous constituents present in RTM, infrastructure containing  
11 hazardous materials, and the disruption of existing hazardous materials transport routes would be  
12 the same as those described under Alternative 1B. Like Alternative 1B, under this alternative, there  
13 are 13 overhead power/electrical transmission lines, five natural gas pipelines, and four petroleum  
14 product pipelines (Table 24-3) within the proposed construction footprint. In addition, there are 57  
15 inactive and four active oil or gas wells within the proposed Alternative 6B water conveyance  
16 construction footprint (California Department of Water Resources 2010b:13-1). The precise location  
17 of pipelines within a tunnel section would be identified prior to construction. Abandoned gas wells  
18 would be tested to confirm that they have been abandoned according to DOGGR well abandonment  
19 requirements. Those wells not abandoned according to these requirements would be improved. In  
20 addition, to avoid the potential conflicts with shaft construction and disposal areas, the utility and  
21 infrastructure relocation would be coordinated with local agencies and owners.

22 Existing structures that would need to be removed or relocated are the same as described for  
23 Alternative 1B. These structures may contain hazardous materials that would require proper  
24 handling and disposal, if demolition is necessary. As described for Impact HAZ-1 under Alternative  
25 1A, Mitigation Measure HAZ-1b would be implemented by DWR to ensure that there are no adverse  
26 effects related to hazardous materials from structure demolition. Risks associated with the  
27 transportation of hazardous materials via truck, trains, and ships would be similar to those  
28 described under Alternative 1A but would occur in different areas. Hazardous materials  
29 transportation routes that would be used under this alternative are presented in Figure 24-2 and in  
30 Table 24-4. Routes anticipated to be affected during construction of the water conveyance facilities  
31 are listed in Chapter 19, *Transportation*. Under Mitigation Measure TRANS-1a, a site-specific  
32 construction traffic management plan, taking into account hazardous materials transportation,  
33 would be prepared and implemented prior to initiation of construction of water conveyance  
34 facilities. This plan would reduce the potential for effects on hazardous materials transportation  
35 routes in the study area. Barges supporting water conveyance facilities construction may also  
36 transport hazardous materials such as fuels and lubricants or other chemicals. The potential exists  
37 for accidental release of hazardous materials from BDCP-related barges. To avoid effects on the  
38 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
39 (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix 3B, *Environmental*  
40 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
41 materials during transport and transfer. Further, the Alternative 6B water conveyance facilities  
42 alignment would cross one railroad ROW at the BNSF railroad in San Joaquin County near Holt. A  
43 culvert siphon would be built at this rail crossing, reducing potential hazards associated with rail  
44 transportation. Two segments of a UPRR line would intersect with bridge facilities constructed east  
45 of the intake facilities and other construction work areas would be immediately adjacent to an out-  
46 of-service UPRR Tracy Subdivision branch line near the California Aqueduct at the southern end of

1 the water conveyance facilities. Because these crossings are in construction work areas, train  
 2 operations along the BNSF Railway/Amtrak San Joaquin Line could be affected. Additional conflicts  
 3 could arise if the out-of-service UPRR line were reopened. Mitigation Measure TRANS-1a would  
 4 include stipulations to coordinate with rail providers to develop alternative interim transportation  
 5 modes (e.g., trucks or buses) that could be used to provide freight and/or passenger service during  
 6 any longer term railroad closures and daily construction time windows during which construction  
 7 would be restricted or rail operations would need to be suspended for any activity within railroad  
 8 rights of way. This would minimize the potential risk of release of hazardous materials being  
 9 transported via these rails.

10 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would minimize, to  
 11 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
 12 is suspected or has been verified. Further, environmental commitments would be implemented,  
 13 including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical  
 14 characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. Together, the  
 15 environmental commitments would reduce these potential hazards associated with water  
 16 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
 17 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a,  
 18 TRANS-5a, and TRANS-6 (described in Chapter 19, *Transportation*) would further reduce the  
 19 potential severity of this impact. As such, construction of the water conveyance facilities would not  
 20 create a substantial hazard to the public or the environment through the routine transport, use, or  
 21 disposal of hazardous materials or the upset/accidental release of these materials. Thus, this effect  
 22 would not be adverse.

23 **CEQA Conclusion:** During construction of the water conveyance facilities, the potential would exist  
 24 for direct significant impacts on construction personnel, the public and/or the environment  
 25 associated with the routine use of hazardous materials; natural gas accumulation in water  
 26 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment and  
 27 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
 28 electrical transmission lines; and potentially hazardous constituents present in RTM. Additionally,  
 29 the potential would exist for the construction of the water conveyance facilities to indirectly result  
 30 in the release of hazardous materials through the disruption of existing road, rail, or river hazardous  
 31 materials transport routes, which, were this to occur, would be considered a significant impact.  
 32 However, with the implementation of the previously described environmental commitments (for  
 33 Impact HAZ-1 under Alternative 1A) and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c  
 34 (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19,  
 35 *Transportation*), construction of the water conveyance facilities would not create a substantial  
 36 hazard to the public or the environment through the routine transport, use, or disposal of hazardous  
 37 materials or the upset/accidental release of these materials. Accordingly, these impacts would be  
 38 less than significant.

39 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 40 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 41 **Construction Footprint, and Remediate and/or Contain Contamination**

42 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 43 1A.

1       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 2       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 3       **Dispose of Them in Accordance with Applicable Regulations**

4       Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 5       1A.

6       **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

7       Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 8       Chapter 20, *Public Services and Utilities*.

9       **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 10       **Minimizes Any Effect on Worker and Public Health and Safety**

11       Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 12       Chapter 20, *Public Services and Utilities*.

13       **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 14       **Plan**

15       Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 16       1A in Chapter 19, *Transportation*.

17       **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 18       **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 19       **Facilities**

20       **NEPA Effects:** There are no schools or hospitals within 0.25 mile of Alternative 6B. However,  
 21       Buckley Cove and Nelson Parks, both in Stockton, are within 0.25 mile of the construction footprint  
 22       of this alternative. Buckley Cove Park is west of a proposed borrow and/or spoils area across the  
 23       Stockton Deep Water Ship Channel, and Nelson Park is just north of a proposed temporary 69-kV  
 24       transmission line. Potential effects related to the handling of hazardous materials as part of  
 25       construction of the water conveyance facilities would be similar to those described under Impact  
 26       HAZ-2 for Alternative 1A. Although there would be a risk of accidental spills of hazardous materials  
 27       (e.g., fuels, solvents, paints) during facility construction, the quantities of hazardous materials likely  
 28       to be used during construction activities are likely to be small, and were they to be released  
 29       inadvertently, spills would be localized. Further, BMPs to minimize the potential for the accidental  
 30       release of hazardous materials and to contain and remediate hazardous spills, as part of the  
 31       SWPPPs, SPCCPs, and HMMPs, would be implemented, as set forth in Appendix 3B, *Environmental*  
 32       *Commitments, AMMs, and CMs*. Therefore, it is unlikely people at these parks would be at risk or  
 33       adversely affected due to exposure of hazardous materials, substances, or waste during construction  
 34       of the water conveyance facilities. As such, this effect would not be adverse. Potential air quality  
 35       effects on sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*, and  
 36       potential EMF effects on sensitive receptors are discussed in Chapter 25, *Public Health*.

37       **CEQA Conclusion:** There are no schools or hospitals within 0.25 mile of Alternative 6B. Buckley  
 38       Cove and Nelson Parks in Stockton are within 0.25 mile of the construction footprint of Alternative  
 39       6B. Buckley Cove Park is west of a proposed borrow and/or spoils area across the Stockton Deep  
 40       Water Ship Channel, and Nelson Park is located just north of a proposed temporary 69-kV

1 transmission line. During construction of the water conveyance facilities under this alternative,  
2 there would be a risk of accidental spills of hazardous materials used during construction activities.  
3 However, the potential for significant impacts on people at these parks due to these potential  
4 inadvertent releases would be negligible because spills would likely be small and localized. Further,  
5 BMPs to minimize the potential for the accidental release of hazardous materials and to contain and  
6 remediate hazardous spills, as part of the SWPPPs, SPCCPs, and HMMPs, would be implemented, as  
7 set forth in Appendix 3B, *Environmental Commitments, AMMs, and CMs*. Therefore, people at these  
8 parks would not be at risk or affected by exposure to hazardous materials, substances, or waste  
9 during construction of the water conveyance facilities, and as such, this impact would be less than  
10 significant. Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air*  
11 *Quality and Greenhouse Gases*, and potential EMF effects on sensitive receptors are discussed in  
12 Chapter 25, *Public Health*.

### 13 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,** 14 **Create a Significant Hazard to the Public or the Environment**

15 **NEPA Effects:** Effects related to sites on the Cortese List and SOCs would be the same as those  
16 described under Alternative 1B. The Sarale Farms site (a “Cortese List” site) and Kinder Morgan  
17 Energy pipeline access station site are located within the construction footprints for proposed  
18 temporary 69-kV transmission lines (Table 24-5 and Figure 24-4). At the Sarale Farms site, a  
19 10,000-gallon petroleum UST was removed in 1992. Soil and groundwater contain petroleum  
20 products in excess of cleanup standards.

21 Because construction of the temporary transmission line would not entail deep excavation or  
22 require dewatering activities, no conflict with existing hazards at this site are anticipated. However,  
23 if dewatering and/or deep excavation were required in this area contaminated groundwater could  
24 be drawn up and/or contaminated soils may be disturbed, respectively. Improper disposal of  
25 contaminated excavated soils or groundwater would have the potential to adversely affect the  
26 environment. To avoid this potential adverse effect, Mitigation Measure HAZ-1a would be  
27 implemented to ensure that any known or suspected soil and/or groundwater contamination is not  
28 re-released. Further, design of the transmission line, including pole placement, would avoid the  
29 Kinder Morgan Energy and Sarale Farms site to the extent practicable to ensure there were no  
30 adverse hazardous effects associated with construction on or in close proximity to these sites.

31 For those hazardous materials sites identified within the 0.5-mile radius of Alternative 6B but which  
32 are not within the construction footprint, there would be no potential for the construction of the  
33 water conveyance facilities to disturb those sites such that there would be a re-release of hazardous  
34 materials that would create a hazard for the public or environment. Therefore, there would be no  
35 adverse effect. The potential for encountering unknown hazardous materials sites during the course  
36 of construction is discussed under Impact HAZ-1, above.

37 **CEQA Conclusion:** The re-release of hazardous materials during construction activities (dewatering  
38 and/or deep excavation) at the Sarale Farms site or the Kinder Morgan Energy pipeline access  
39 station site within the construction footprints for proposed temporary 69-kV transmission lines  
40 could result in a significant impact. However, a significant impact on the environment would be  
41 avoided with implementation of Mitigation Measure HAZ-1a. Further, project design would  
42 minimize, to the extent feasible, the need traverse areas where the presence of hazardous materials  
43 is suspected or has been verified, or where interference with existing infrastructure might result in  
44 hazards. As a result, there would be a less-than-significant impact on the public and/or environment

1 under Alternative 6B because construction of the water conveyance facilities near the Kinder  
 2 Morgan Energy pipeline access station site and the Sarale Farms site would not result in hazardous  
 3 materials releases from these sites. The potential for encountering other unknown hazardous  
 4 materials sites during the course of construction is discussed under Impact HAZ-1, above.

5 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 6 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 7 **Construction Footprint, and Remediate and/or Contain Contamination**

8 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 9 1A.

10 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 11 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 12 **Study Area during Construction of the Water Conveyance Facilities**

13 **NEPA Effects:** Potential effects on air safety under this alternative would be the same as Alternative  
 14 1B. The Borges-Clarksburg Airport, Byron Airport, and Lost Isle Seaplane Base are within 2 miles of  
 15 the Alternative 6B water conveyance facilities (Figure 24-9). The Borges-Clarksburg Airport is a  
 16 private, special use airport with a land use plan. The Lost Isle Seaplane Base and Byron Airport are  
 17 designated as a public use airports and are subject to FAA regulations (14 CFR Part 77) regarding  
 18 construction within 10,000 feet. Construction of a state building or enclosure within 2 miles of any  
 19 airport is subject to review of Caltrans' Division of Aeronautics for safety and noise effects. In the  
 20 event final locations for any state building or enclosure would be within 2 miles of any airport,  
 21 Caltrans' Division of Aeronautics would require written notification and a review would be  
 22 performed. DWR would adhere to any recommendations resulting from this review. Additionally,  
 23 depending on the location and height of any high-profile construction equipment, the Lost Isle  
 24 Seaplane Base and Byron Airport, because they are public air facilities, may be subject to an OE/AAA  
 25 (14 CFR Part 77) to be performed by the FAA. Compliance with the results of the OE/AAA would  
 26 reduce the risk of adverse effects on air traffic in the vicinity of these public airports. Thus, there  
 27 would be no adverse effects on air safety.

28 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 29 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 30 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
 31 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
 32 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
 33 is operated too close to runways. Two public airports (Lost Isle Seaplane Base and Byron Airport)  
 34 and one private airport (Borges-Clarksburg Airport) are located within 2 miles of the construction  
 35 footprint of Alternative 6B. DWR would coordinate with Caltrans' Division of Aeronautics prior to  
 36 initiating construction and comply with its recommendations based on its investigation(s), as well  
 37 comply with the recommendations of the OE/AAA (for Byron Airport and the Lost Isle Seaplane  
 38 Base). Compliance with these recommendations, which could include limitations necessary to  
 39 minimize potential problems, such as the use of temporary construction equipment, supplemental  
 40 notice requirements, and marking and lighting high-profile structures would reduce the potential  
 41 for impacts on air safety. Accordingly, impacts on air safety would be less than significant. No  
 42 mitigation is required.

1 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 2 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 3 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 4 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

5 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 6 Alternative 1B. The northernmost and southernmost extent of this conveyance alignment would be  
 7 adjacent to zones of moderate fire hazard severity (Figure 24-10).

8 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 9 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 10 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire  
 11 safety and prevention. Additionally, DWR would develop and implement fire safety, prevention and  
 12 control BMPs as part of a FPCP in coordination with federal, state, and local agencies.  
 13 Implementation of these would help ensure that people or structures would not be subject to a  
 14 significant risk of loss, injury or death involving wildland fires. Therefore, this effect would not be  
 15 adverse.

16 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 17 death involving wildland fires during construction or operation and maintenance of the water  
 18 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and  
 19 safety standards; DWR would implement standard fire safety and prevention measures, as part of a  
 20 FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
 21 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
 22 Therefore, this impact would be less than significant. No mitigation is required.

23 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 24 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 25 **Water Conveyance Facilities**

26 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 27 conveyance facilities would be similar to those described for Alternative 1B. Under Alternative 6B,  
 28 however, the potential for hazards associated with intake pumping plants and sediment basins  
 29 could be greater, based upon heavier and more frequent use of north Delta intakes under isolated  
 30 operational guidelines. This alternative may require the transport, storage, and use of chemicals or  
 31 hazardous waste materials including fuel, oils, grease, solvents, and paints. Solids collected at solids  
 32 lagoons and sediment dredged during intake maintenance may contain hazardous constituents (e.g.,  
 33 persistent pesticides, mercury, PCBs). To ensure that potentially contaminated sediment from  
 34 maintenance dredging activities at the intakes would not adversely affect soil, groundwater or  
 35 surface water, a SAP would be implemented prior to any dredging activities, as described under  
 36 Impact HAZ-1 for this alternative. All sediment would be characterized chemically prior to reuse to  
 37 ensure that reuse of this material would not result in a hazard to the public or the environment.

38 As noted above, the Borges-Clarksburg Airport, Byron Airport, and Lost Isle Seaplane Base would be  
 39 within 2 miles of the Alternative 6B water conveyance facilities. With the exception of the proposed  
 40 power transmission lines and towers, water conveyance facilities are not anticipated to require the  
 41 use of high-profile equipment during operations and maintenance. Depending on the location and  
 42 height of equipment necessary for transmission line maintenance, the Lost Isle Seaplane Base and  
 43 Byron Airport, because they are public air facilities, would be subject to an OE/AAA (14 CFR Part 77)  
 44 to be performed by the FAA. (14 CFR Part 77) regarding potential obstructions to air navigation

1 within 2 miles of an airport. Additionally, DWR would coordinate Caltrans' Division of Aeronautics  
2 prior to any maintenance activities requiring high-profile maintenance equipment to ensure that  
3 there is no safety conflict with air traffic. Compliance with these recommendations, which could  
4 include limitations necessary to minimize potential problems, such as the use of temporary  
5 construction equipment, supplemental notice requirements, and marking and lighting high-profile  
6 structures would reduce the potential for impacts on air safety.

7 As described under Alternative 1B, potential releases of hazardous materials associated with  
8 operation and maintenance of the water conveyance facilities under Alternative 6B could result in  
9 an adverse effect on workers, the public (including sensitive receptors within 0.25 mile of the  
10 construction footprint), and the environment. As indicated above under Impact HAZ-2 for this  
11 alternative, Buckley Cove and Nelson Parks in Stockton are within 0.25 mile of a proposed  
12 borrow/spoils area and a proposed temporary 69-kV transmission line, respectively. Because the  
13 proposed 69-kV transmission line is temporary, it would be removed following completion of the  
14 water conveyance facilities, and therefore no maintenance activities would occur in this area. No  
15 maintenance activities would take place in the borrow/spoils area, per se; however, should the  
16 spoils be used at some later time, heavy construction equipment such as dump trucks and  
17 excavators would be needed to move the spoils. Consequently, there could be the potential for oil  
18 leakage from these vehicles. Although there would be a risk of accidental spills of hazardous  
19 materials (e.g., fuels, solvents, paints) during facility operation and maintenance, the quantities of  
20 hazardous materials likely to be used during routine operations and maintenance are likely to be  
21 small. Were hazardous materials to be released inadvertently, they would be localized. Further,  
22 BMPs to minimize the potential for the accidental release of hazardous materials and to contain and  
23 remediate hazardous spills, as part of the SWPPPs, SPCCPs, and HMMPs, would be implemented, as  
24 set forth in Appendix 3B, *Environmental Commitments, AMMs, and CMs*. Therefore, it is unlikely that  
25 park visitors would be at risk or adversely affected.

26 Improper disposal of potentially contaminated (e.g., persistent pesticides and mercury) lagoon  
27 solids could result in contamination of soil, groundwater and surface water, which would be  
28 considered an adverse effect. However, with implementation of Mitigation Measure HAZ-6, solids  
29 from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
30 disposed of accordingly at an appropriate, licensed facility in order to avoid an adverse effect on the  
31 environment from potential contamination.

32 Therefore, with implementation of BMPs as part of environmental commitments and with  
33 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
34 facilities would not create a substantial hazard to the public or the environment and there would be  
35 no adverse effect.

36 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
37 operation and maintenance of the water conveyance facilities and the potential interference with air  
38 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
39 could have impacts on the public and environment. However, implementation of the BMPs and other  
40 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
41 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
42 when performing work with high-profile equipment within 2 miles of an airport, which would  
43 include implementation of recommendations to provide supplemental notice and/or equip high-  
44 profile structures with marking and lighting, would ensure that operation and maintenance of the  
45 water conveyance facilities would not create a substantial hazard to the public, environment or air

1 traffic safety. Improper disposal of potentially contaminated (e.g., persistent pesticides and  
 2 mercury) lagoon solids could result in contamination of soil, groundwater and surface water, which  
 3 would be considered a significant impact. With implementation of Mitigation Measure HAZ-6, solids  
 4 from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
 5 disposed of accordingly at an appropriate, licensed facility in order to avoid a significant impact on  
 6 the environment from potential contamination.

7 Therefore, with implementation of BMPs as part of environmental commitments and with  
 8 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
 9 facilities would not create a substantial hazard to the public or the environment and, accordingly,  
 10 this impact would be less than significant.

11 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 12 **and/or Disposal**

13 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
 14 1A.

15 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 16 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 17 **CM13, CM14, CM16, CM18 and CM19**

18 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 19 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 20 workers, the public, and the environment would be similar to those described under Alternative 1A.  
 21 Potential variation from Alternative 1A would be anticipated to be minor but could result from the  
 22 selection of different areas for restoration activities based on the location of the physical water  
 23 conveyance features associated with each alternative.

24 Hazardous materials associated with the operation of construction equipment could be released into  
 25 the environment in the course of the materials' routine transport, use, or disposal. Releases could  
 26 also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
 27 known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
 28 creating the potential for their disturbance and release. Other activities, including the intentional  
 29 demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM,  
 30 would also present the potential to generate hazards or release hazardous materials. However, prior  
 31 to the reuse of spoils, dredged material or RTM, these materials would undergo chemical  
 32 characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, to  
 33 ensure that they are not creating a hazard to the public and environment.

34 Further, other potential hazards that could result from implementing conservation measures  
 35 include the possible release of hazardous substances in proximity to sensitive receptors the  
 36 accidental release of hazardous substances during operation and maintenance (e.g., herbicides for  
 37 nonnative vegetation control); the release, in the short-term, of pesticides from former agricultural  
 38 lands as a result of wetland and floodplain restoration; damage or disruption of existing  
 39 infrastructure such that hazardous conditions were created the potential for safety hazards related  
 40 to construction in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of  
 41 construction sites.

1 These potential effects, were they to occur, would be adverse. However, the proposed conservation  
 2 measures would be designed to avoid sensitive receptors and would minimize, to the extent feasible,  
 3 the need to acquire or traverse areas where the presence of hazardous materials is suspected or has  
 4 been verified. Additionally, with implementation of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a,  
 5 UT-6c, TRANS-1a, and environmental commitments (discussed previously for Impacts HAZ-1  
 6 through HAZ-6, and in detail in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), the  
 7 potential for substantial hazards to the public or environment would be reduced and, accordingly,  
 8 there would be no adverse effect. Thus, this effect would not be adverse.

9 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
 10 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

11 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
 12 public to hazardous substances or conditions during construction, operation, and maintenance of  
 13 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 14 implementation would involve extensive use of heavy equipment during construction, and/or the  
 15 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 16 for nonnative vegetation control). These chemicals could be inadvertently released, exposing  
 17 construction workers or the public to hazards. Construction of restoration projects on or near  
 18 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 19 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 20 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
 21 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
 22 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
 23 ensure that these potential impacts would be less than significant.

24 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 25 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 26 **Construction Footprint, and Remediate and/or Contain Contamination**

27 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 28 1A.

29 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 30 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 31 **Dispose of Them in Accordance with Applicable Regulations**

32 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 33 1A.

34 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

35 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 36 Chapter 20, *Public Services and Utilities*.

37 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 38 **Minimizes Any Effect on Worker and Public Health and Safety**

39 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 40 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 2           **Plan**

3           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 4           1A in Chapter 19, *Transportation*.

5           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 6           **Conservation Measures that Create or Improve Wildlife Habitat**

7           **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 8           wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 9           strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 10          from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 11          areas for restoration activities based on the location of the physical water conveyance features  
 12          associated with each alternative. Such variation may result greater or less opportunity for bird-  
 13          aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 14          because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 15          zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 16          Airport; Sacramento International Airport, and Byron Airport.

17          The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 18          because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 19          would reduce the severity of this effect through the development and implementation of measures  
 20          to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 21          adverse.

22          **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 23          habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 24          flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 25          significant impacts on public safety. The following airports, because they are in relatively close  
 26          proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 27          Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 28          Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 29          through the ultimate development and implementation of measures to reduce, minimize and/or  
 30          avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 31          significant and unavoidable.

32           **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 33           **Regulatory Agencies**

34           Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 35           1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 36           a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 37           extent possible.

### 24.3.3.13 Alternative 6C—Isolated Conveyance with West Alignment and Intakes W1–W5 (15,000 cfs; Operational Scenario D)

#### Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the Release of Hazardous Materials or by Other Means during Construction of the Water Conveyance Facilities

**NEPA Effects:** For the duration of construction of the water conveyance facilities, potential hazards associated with the routine use of hazardous materials; natural gas accumulation in tunnels; existing contaminants in soil, groundwater, or sediment; hazardous constituents present in RTM; infrastructure containing hazardous materials; and the routine transport of hazardous materials would be identical to those described under Alternative 1C.

Construction of the water conveyance facilities would create the potential for direct adverse effects on construction personnel, the public and/or the environment associated with the routine use of hazardous materials; natural gas accumulation in water conveyance tunnels; the inadvertent release of existing contaminants in soil, groundwater, and sediment, or hazardous materials in existing structures to be removed or relocated; disturbance of electrical transmission lines or other infrastructure; and hazardous constituents present in RTM. Additionally, there is the potential for the construction of the water conveyance facilities to indirectly result in the release of hazardous materials through the disruption of existing road, rail, and/or river hazardous materials transport routes, which, were this to occur, would be considered an adverse effect.

As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would minimize, to the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is suspected or has been verified environmental commitments would be implemented, including, but not limited to SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. Together, the environmental commitments would reduce these potential hazards associated with water conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact. As such, construction of the water conveyance facilities would not create a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or the upset/accidental release of these materials. Thus, this effect would not be adverse.

**CEQA Conclusion:** During construction of the water conveyance facilities, the potential would exist for direct significant impacts on construction personnel, the public, and the environment associated with the routine use of hazardous materials; natural gas accumulation in water conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment and groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of electrical transmission lines; and hazardous constituents present in RTM. Additionally, the potential would exist for the construction of the water conveyance facilities to indirectly result in the release of hazardous materials through the disruption of existing road, rail, and or river hazardous materials transport routes, which, were this to occur, would be considered a significant impact. However, with the implementation of the previously described environmental commitments and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the water conveyance facilities would not create a substantial hazard to the public or the environment through the routine transport, use, or disposal

1 of hazardous materials or the upset/accidental release of these materials. As such, these impacts  
2 would be less than significant.

3 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
4 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
5 **Construction Footprint, and Remediate and/or Contain Contamination**

6 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
7 1A.

8 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
9 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
10 **Dispose of Them in Accordance with Applicable Regulations**

11 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
12 1A.

13 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

14 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
15 Chapter 20, *Public Services and Utilities*.

16 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
17 **Minimizes Any Effect on Worker and Public Health and Safety**

18 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
19 Chapter 20, *Public Services and Utilities*.

20 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
21 **Plan**

22 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
23 1A in Chapter 19, *Transportation*.

24 **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
25 **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
26 **Facilities**

27 **NEPA Effects:** Potential effects related to the handling of hazardous materials as part of construction  
28 of the water conveyance facilities would be similar to those described under Impact HAZ-2 for  
29 Alternative 1C. There are no hospitals located within 0.25 mile of Alternative 6C. However, as shown  
30 in Figure 24-8, Lakewood Drive, Sycamore Drive, and Summer Lake Community Parks in Oakley, and  
31 Mokelumne High (Continuation) School in Courtland would be within 0.25 mile of the construction  
32 footprint for this alternative. Sycamore Drive Park would be near a tunnel work area, and Lakewood  
33 Drive and Summer Lake Community Parks, and Mokelumne High (Continuation) School would be  
34 near the proposed transmission line construction footprint.

35 Although there would be a risk of accidental spills of hazardous materials (e.g., fuels, solvents,  
36 paints) during facility construction, the quantities of hazardous materials likely to be used during  
37 construction activities are likely to be small. Were hazardous materials to be released inadvertently,  
38 spills would be localized. Further, BMPs to minimize the potential for the accidental release of

1 hazardous materials and to contain and remediate hazardous spills, as part of the SWPPPs, SPCCPs,  
 2 and HMMPs, would be implemented, as set forth in Appendix 3B, *Environmental Commitments*,  
 3 *AMMs*, and *CMs*. Therefore, it is unlikely that these sensitive receptors would be at risk or adversely  
 4 affected because they would not be exposed to hazardous materials, substances, or waste during  
 5 construction of the water conveyance facilities. As such, there would be no adverse effect. Potential  
 6 air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse*  
 7 *Gases*.

8 **CEQA Conclusion:** Lakewood Drive, Sycamore Drive, and Summer Lake Community Parks in Oakley,  
 9 and Mokelumne High (Continuation) School in Courtland, are within 0.25 mile of the construction  
 10 footprint of Alternative 6C. During construction of the water conveyance facilities under this  
 11 alternative, there could be a risk of accidental spills of hazardous materials used during construction  
 12 activities. However, the potential for significant impacts on people at these three parks and school  
 13 due to these potential inadvertent releases would be negligible because spills would likely be small  
 14 and localized. Further, BMPs to minimize the potential for the accidental release of hazardous  
 15 materials and to contain and remediate hazardous spills, as part of the SWPPPs, SPCCPs, and  
 16 HMMPs, would be implemented, as set forth in Appendix 3B, *Environmental Commitments*, *AMMs*,  
 17 *and CMs*. Therefore, because these sensitive receptors would not be exposed to hazardous materials,  
 18 substances, or waste during construction of the water conveyance facilities, this impact would be  
 19 less than significant. No mitigation is required. Potential air quality effects on sensitive receptors are  
 20 discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

21 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 22 **Create a Significant Hazard to the Public or the Environment**

23 **NEPA Effects:** Effects related to sites on the “Cortese List” would be the same as those described  
 24 under Alternative 1C. There are no “Cortese List” sites within the construction footprint of the  
 25 Alternative 6C water conveyance facilities. However, as indicated in Table 24-5, Mill Site A, the site  
 26 of a former large agricultural mill, would be located in a proposed borrow and/or spoils area within  
 27 the construction footprint of this alternative. This site was identified as a SOC in the 2009 ISA.  
 28 However, there is no regulatory listing for this site, and no known hazardous materials occur at this  
 29 site within the Alternative 6C construction footprint (Figure 24-4). Consequently, the potential to  
 30 conflict with hazardous materials at this site is assumed to be minimal, and as such, there would be  
 31 no significant hazard to the public or the environment due to construction of the water conveyance  
 32 facilities. Therefore, this effect would not be adverse.

33 For those hazardous materials sites identified within the 0.5-mile radius but which are not within  
 34 the construction footprint, there would be no potential for construction of the water conveyance  
 35 facilities to disturb those sites such that there would be a re-release of hazardous materials that  
 36 would create a hazard for the public or environment. The potential for encountering unknown  
 37 hazardous materials sites during the course of construction is discussed under Impact HAZ-1.

38 **CEQA Conclusion:** Mill Site A, the site of a former large agricultural mill, would be located in a  
 39 potential borrow and/or spoils area within the construction footprint of this alternative. There is no  
 40 regulatory listing for this site, and no known hazardous materials occur at this site. Therefore, the  
 41 potential risk to conflict with hazardous materials at this site is negligible, and there would be no  
 42 significant hazard to the public or the environment, and, as such, this impact would be less than  
 43 significant. No mitigation is required. The potential for encountering unknown hazardous materials  
 44 sites during the course of construction is discussed under Impact HAZ-1.

1 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
2 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
3 **Study Area during Construction of the Water Conveyance Facilities**

4 **NEPA Effects:** Safety hazards related to air traffic would be the same as those described for  
5 Alternative 1C. Under Alternative 6C, the water conveyance facilities would be within 2 miles of the  
6 Delta Air Park, Funny Farm Airport, and Borges-Clarksburg Airport, all private facilities, and Byron  
7 Airport (a public air facility), as shown in Figure 24-9. The use of helicopters for stringing the  
8 proposed 230-kV transmission lines and of high-profile construction equipment (200 feet or taller),  
9 such as cranes, for installation of pipelines, placement of concrete fill in intake piles, and removal of  
10 cofferdam sheet piles, for example, and potentially pile drivers, such as would be used during the  
11 construction of the intakes, have the potential to result in safety hazards to aircraft during takeoff  
12 and landing if the equipment is operated too close to runways. Depending on the location and height  
13 of any high-profile construction equipment or structures relative to the Byron Airport, because it is  
14 a public air facility, the BDCP may be subject to an OE/AAA to be performed by the FAA, as discussed  
15 under Impact HAZ-4 for Alternative 1A. Compliance with the results of the OE/AAA (14 CFR Part  
16 77), would reduce the risk of adverse effects on air traffic safety due to water conveyance facility  
17 construction activities in the vicinity of this airport. In addition, the Caltrans' Division of Aeronautics  
18 would be informed in writing, as discussed under Impact HAZ-4 for Alternative 1A, and DWR would  
19 comply with Caltrans' recommendations to avoid any adverse effects on air safety. Consequently,  
20 there would be no adverse effect on air safety during construction of the water conveyance facilities.

21 **CEQA Conclusion:** The Delta Air Park, Funny Farm Airport, and Borges-Clarksburg Airport, all  
22 private airstrips, and Byron Airport, a public air facility, would be within 2 miles of the construction  
23 footprint of several proposed water conveyance facilities features, as well as associated work areas  
24 for Alternative 6C. The use of helicopters for stringing the proposed 230-kV transmission lines and  
25 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
26 pipelines, placement of concrete fill in intake piles, and removal of cofferdam sheet piles, for  
27 example, and potentially pile drivers, such as would be used during the construction of the intakes,  
28 have the potential to result in safety hazards to aircraft during takeoff and landing if the equipment  
29 is operated too close to runways. DWR would coordinate with Caltrans' Division of Aeronautics  
30 prior to initiating construction and comply with its recommendations based their review, as well  
31 comply with the recommendations of the OE/AAA (for Byron Airport). Compliance with these  
32 recommendations, which could include limitations necessary to minimize potential problems, such  
33 as the use of temporary construction equipment, supplemental notice requirements, and marking  
34 and lighting high-profile structures would reduce the potential for impacts on air safety.  
35 Accordingly, the impacts on air safety would be less than significant. No mitigation is required.

36 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
37 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
38 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
39 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

40 **NEPA Effects:** Potential hazards related to wildland fire would be similar to those described under  
41 Alternative 1C. As shown in Figure 24-10, no portion of Alternative 6C is located in or near an area  
42 designated as a High or Very High Fire Hazard Severity Zone. The northernmost and southernmost  
43 portions of Alternative 6C would be located near Moderate Fire Hazard Severity Zones.

1 As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, precautions would be  
 2 taken to prevent wildland fires during construction, and operation and maintenance of the water  
 3 conveyance facilities. Specifically, in an effort to reduce the potential for fire hazards, DWR and/or  
 4 contractors would develop and implement fire safety, prevention and control measures as part of a  
 5 FPCP in coordination with federal, state, and local agencies. Development and implementation of the  
 6 FPCP would help ensure that people or structures would not be subject to a significant risk of loss,  
 7 injury or death involving wildland fires. Therefore, this effect would not be adverse.

8 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 9 death involving wildland fires during construction or operation and maintenance of the water  
 10 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and  
 11 safety standards; DWR would implement standard fire safety and prevention measures, as part of a  
 12 FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
 13 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
 14 Therefore, this impact would be less than significant. No mitigation is required.

15 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 16 **Release of Hazardous Materials or Other Means during Operation and Maintenance of the**  
 17 **Water Conveyance Facilities**

18 Potential hazards related to the long-term operation and maintenance of the proposed water  
 19 conveyance facilities would be similar to those described for Alternative 1C. Under this alternative,  
 20 however, the potential for hazards associated with intake pumping plants and sediment basins  
 21 could be greater, based upon heavier and more frequent use of north Delta intakes under isolated  
 22 operational guidelines. This alternative may require the transport, storage, and use of chemicals or  
 23 hazardous waste materials including fuel, oils, grease, solvents, and paints. Solids collected at solids  
 24 lagoons and sediment dredged during intake maintenance may contain hazardous constituents (e.g.,  
 25 persistent pesticides, mercury, PCBs).

26 Delta Air Park, Byron Airport, Funny Farm and Borges-Clarksburg Airport are within 2 miles of the  
 27 Alternative 6C construction footprint, as described under Alternative 1C. With the exception of  
 28 power transmission lines supplying power to pumps and other equipment used for operation and  
 29 maintenance of the alternative, water conveyance operations and maintenance are not anticipated  
 30 to require high-profile equipment, the use of which near an airport could result in an adverse effect  
 31 on aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and would  
 32 coordinate with Caltrans' Division of Aeronautics prior to any maintenance activities requiring high-  
 33 profile maintenance equipment and comply with any recommendation Caltrans may have to ensure  
 34 that there is no conflict with or adverse effect on air traffic.

35 As previously discussed under Impact HAZ-2, Lakewood Drive, Sycamore Drive, and Summer Lake  
 36 Community Parks in Oakley, and Mokelumne High (Continuation) School in Courtland would be  
 37 within 0.25 mile of the construction footprint for Alternative 6C. Should hazardous materials be  
 38 inadvertently released in substantially quantities during routine operations and maintenance at the  
 39 constructed facilities due to improper handling, there would be a potential risk to the public  
 40 (including sensitive receptors). However, because the types of potentially hazardous materials used  
 41 during routine operation and maintenance activities would be used in relatively small quantities,  
 42 and because BMPs, as would be implemented in the SWPPPs, SPCCPs, and HMMPs (as described in  
 43 Appendix 3B, *Environmental Commitments, AMMs, and CMs*), would be in place to help prevent the  
 44 inadvertent release of these materials and to contain and remediate spills should they occur, the risk

1 to sensitive receptors within 0.25 mile of the construction footprint for this alternative would be  
2 negligible.

3 Improper disposal of potentially contaminated (e.g., persistent pesticides and mercury) lagoon  
4 solids could result in contamination of soil, groundwater and surface water, which would be  
5 considered an adverse effect. However, with implementation of Mitigation Measure HAZ-6, solids  
6 from the solids lagoons would be sampled and characterized to evaluate disposal options, and  
7 disposed of accordingly at an appropriate, licensed facility in order to avoid an adverse effect on the  
8 environment due to potential contamination.

9 Therefore, with implementation of BMPs as part of environmental commitments and with  
10 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
11 facilities would not create a substantial hazard to the public or the environment and, accordingly,  
12 there would be no adverse effect.

13 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
14 operation and maintenance of the water conveyance facilities and interference with air traffic safety  
15 would potentially be a significant impact on the public and environment. However, implementation  
16 of SWPPPs, SPCCPs, HMMPs, SAPs, as well as adherence to all applicable FAA regulations and  
17 coordination/compliance with Caltrans' Division of Aeronautics when performing work with high-  
18 profile equipment within 2 miles of an airport, which would include implementation of  
19 recommendations to provide supplemental notice and/or equip high-profile structures with  
20 marking and lighting, would ensure that operation and maintenance of the water conveyance  
21 facilities would not create a substantial hazard to the public, environment or air traffic safety.  
22 Improper disposal of potentially contaminated (e.g., persistent pesticides and mercury) lagoon  
23 solids could result in contamination of soil, groundwater and surface water, which would be  
24 considered a significant impact. With implementation of Mitigation Measure HAZ-6, solids from the  
25 solids lagoons would be sampled and characterized to evaluate disposal options, and disposed of  
26 accordingly at an appropriate, licensed facility in order to avoid a significant impact on the  
27 environment from potential contamination.

28 Therefore, with implementation of BMPs as part of environmental commitments and with  
29 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
30 facilities would not create a substantial hazard to the public or the environment. Accordingly, this  
31 impact would be less than significant.

### 32 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse** 33 **and/or Disposal**

34 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
35 1A.

### 36 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the** 37 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,** 38 **CM13, CM14, CM16, CM18 and CM19**

39 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
40 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
41 workers, the public, and the environment would be similar to those described under Alternative 1A.  
42 Potential variation from Alternative 1A would be anticipated to be minor but could result from the

1 selection of different areas for restoration activities based on the location of the physical water  
2 conveyance features associated with each alternative.

3 Hazardous materials associated with the operation of construction equipment could be released into  
4 the environment in the course of the materials' routine transport, use, or disposal. Releases could  
5 also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
6 known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
7 creating the potential for their disturbance and release. Other activities, including the intentional  
8 demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM,  
9 would also present the potential to generate hazards or release hazardous materials.

10 Further, other potential hazards that could result from implementing conservation measures  
11 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
12 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
13 release of hazardous substances during operation and maintenance (e.g., herbicides for nonnative  
14 vegetation control); the release, in the short-term, of pesticides from former agricultural lands as a  
15 result of wetland and floodplain restoration; the potential for safety hazards related to construction  
16 in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of construction  
17 sites.

18 These effects, were they to occur, would be considered adverse. However, the proposed  
19 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
20 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
21 suspected or has been verified. Additionally, with implementation of Mitigation Measures HAZ-1a,  
22 HAZ-1b, UT-6a, UT-6c, TRANS-1a, and environmental commitments (discussed previously for  
23 Impacts HAZ-1 through HAZ-6, and in detail in Appendix 3B, *Environmental Commitments, AMMs,*  
24 *and CMs*), the potential for substantial hazards to the public or environment would be reduced and,  
25 accordingly, there would be no adverse effect.

26 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
27 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

28 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
29 public to hazardous substances or conditions during construction, operation, and maintenance of  
30 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
31 implementation would involve extensive use of heavy equipment during construction, and/or the  
32 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
33 for nonnative vegetation control). These chemicals could be inadvertently released, exposing  
34 construction workers or the public to hazards. Construction of restoration projects on or near  
35 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
36 materials, and the use of high-profile equipment in close proximity to airport runways could result  
37 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
38 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
39 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
40 ensure that these potential impacts would be less than significant.

1           **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2           **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3           **Construction Footprint, and Remediate and/or Contain Contamination**

4           Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5           1A.

6           **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7           **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8           **Dispose of Them in Accordance with Applicable Regulations**

9           Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10          1A.

11          **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12          Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13          Chapter 20, *Public Services and Utilities*.

14          **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15          **Minimizes Any Effect on Worker and Public Health and Safety**

16          Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17          Chapter 20, *Public Services and Utilities*.

18          **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19          **Plan**

20          Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21          1A in Chapter 19, *Transportation*.

22          **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 23          **Conservation Measures that Create or Improve Wildlife Habitat**

24          **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 25          wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 26          strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 27          from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 28          areas for restoration activities based on the location of the physical water conveyance features  
 29          associated with each alternative. Such variation may result greater or less opportunity for bird-  
 30          aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 31          because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 32          zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 33          Airport; Sacramento International Airport, and Byron Airport.

34          The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 35          because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 36          would reduce the severity of this effect through the development and implementation of measures  
 37          to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 38          adverse.

1 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 2 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 3 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 4 significant impacts on public safety. The following airports, because they are in relatively close  
 5 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 6 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 7 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 8 through the ultimate development and implementation of measures to reduce, minimize and/or  
 9 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 10 significant and unavoidable.

11 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 12 **Regulatory Agencies**

13 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 14 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 15 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 16 extent possible.

17 **24.3.3.14 Alternative 7—Dual Conveyance with Pipeline/Tunnel, Intakes 2,**  
 18 **3, and 5, and Enhanced Aquatic Conservation (9,000 cfs;**  
 19 **Operational Scenario E)**

20 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 21 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 22 **Conveyance Facilities**

23 **NEPA Effects:** Hazards to the public or the environment through the routine transport, use, or  
 24 disposal of hazardous materials during construction of the water conveyance facilities for Alternative  
 25 7 would be similar to those described under Alternative 1A. Under Alternative 7, however, only  
 26 Intakes 2, 3, and 5 would be constructed. Thus, it is anticipated that effects associated with the  
 27 transport and use of fuels for this alternative would be similar, but less severe, than those described  
 28 for Alternative 1A.

29 Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil  
 30 sediment, or groundwater, hazardous constituents present in RTM, infrastructure containing  
 31 hazardous materials, and routine transportation of hazardous materials would be similar to those  
 32 described under Alternative 1A. Because only Intakes 2, 3, and 5 would be built under this  
 33 alternative, however, implementation would avoid any site-specific contaminants or hazardous  
 34 materials associated with the construction of Intakes 1 and 4.

35 As with Alternative 1A, tunnel construction activities would carry the potential to encounter gases  
 36 that could enter the tunnels and accumulate to flammable or explosive concentrations. Hazardous  
 37 constituents associated with RTM are not anticipated; however, the possibility exists for RTM and  
 38 decanted water to pose a hazard to the construction workers, the public, or the environment.  
 39 Additionally, stored bulk quantities of hazardous materials that have been released to soils and  
 40 groundwater could be rereleased during construction, also posing a potential hazard. Water  
 41 conveyance facilities construction may also require dredging contaminated sediments. Existing

1 infrastructure, including oil and gas wells, also have the potential to release hazardous materials, as  
2 would the transport of hazardous materials during facility construction.

3 The number of existing gas and petroleum product pipelines, and transmission lines within the  
4 proposed construction footprint of Alternative 7 would be the same as under Alternative 1A. The  
5 precise location of pipelines within a tunnel section would be identified prior to construction to  
6 avoid conflicts with shaft construction and disposal of RTM. Studies would be done prior to  
7 construction to identify the minimum allowable distance between existing gas wells and tunnel  
8 excavation. Abandoned wells would be tested to confirm that they have been abandoned according  
9 to DOGGR well abandonment requirements. Those wells not abandoned according to these  
10 requirements would be improved. In addition, to avoid the potential conflicts with shaft  
11 construction and disposal areas, the utility and infrastructure relocation would be coordinated with  
12 local agencies and owners.

13 Under Alternative 7, approximately 143 existing structures would require relocation or removal  
14 because they fall within the construction footprint. These include an estimated 38 residential  
15 structures; 8 recreational structures; 88 storage and agricultural support structures; and 9 other  
16 types of structures (e.g., power/utility structures, bridges and other infrastructure). One fire station  
17 in the community of Hood would also be affected under this alternative. These structures may  
18 contain hazardous materials that would require proper handling and disposal, if demolition is  
19 necessary. As described for Impact HAZ-1 under Alternative 1A, Mitigation Measure HAZ-1b would  
20 be implemented by DWR to ensure that there are no adverse effects related to hazardous materials  
21 from structure demolition.

22 Further, as described for Alternative 1A under Impact HAZ-1, in general, the transportation of  
23 hazardous materials via trucks, trains and ships poses potential risks associated with the accidental  
24 release of these materials to the environment. Rerouting vehicular traffic carrying hazardous  
25 materials during construction of the water conveyance facilities could increase the risk of accidental  
26 release due to inferior road quality or lack of driver familiarity with the modified routes. Hazardous  
27 materials transportation routes are presented in Figure 24-2 and in Table 24-4. Routes anticipated  
28 to be affected during construction of the water conveyance facilities are described in Chapter 19,  
29 *Transportation*. Barges supporting water conveyance facilities construction may also transport  
30 hazardous materials such as fuels and lubricants or other chemicals. The potential exists for  
31 accidental release of hazardous materials from BDCP-related barges. To avoid effects on the  
32 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
33 (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix 3B, *Environmental*  
34 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
35 materials during transport and transfer. Finally, under this alternative, the proposed conveyance  
36 crosses under the existing BNSF/Amtrak San Joaquin line between Bacon Island and Woodward  
37 Island; however, the effect of this crossing would likely be minimal because the proposed  
38 conveyance would traverse the railroad in a deep bore tunnel (see Chapter 19, *Transportation*, for  
39 discussion). Further, the UPRR runs proximate to the construction area of the proposed Byron  
40 Forebay; however, construction is unlikely to disrupt rail service because much of this line has not  
41 been in service recently.

42 Mitigation measures would be in place to ensure that there are no adverse effects on road, rail, or  
43 water transportation, and, thus, the potential for the construction of the water conveyance facilities  
44 to pose risks related to the transportation of hazardous materials would be minimal. As described in  
45 Chapter 19, *Transportation*, under Mitigation Measure TRANS-1a, a site-specific construction traffic

1 management plan, taking into account hazardous materials transportation, would be prepared and  
2 implemented prior to initiation of water conveyance facilities construction. Mitigation Measure  
3 TRANS-1a, would also include stipulations to coordinate with rail providers to develop alternative  
4 interim transportation modes (e.g., trucks or buses) that could be used to provide freight and/or  
5 passenger service during any longer term railroad closures and daily construction time windows  
6 during which construction would be restricted or rail operations would need to be suspended for  
7 any activity within railroad rights of way. This would minimize the potential risk of release of  
8 hazardous materials being transported via these rails.

9 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would minimize, to  
10 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
11 is suspected or has been verified. Further, environmental commitments would be implemented,  
12 including, but not limited to SWPPPs, SPCCPs, SAPs and HMMPs; a Barge Operations Plan; and  
13 chemical characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. The  
14 environmental commitments would reduce these potential hazards associated with water  
15 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
16 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
17 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact.  
18 Therefore, construction of the water conveyance facilities would not create a substantial hazard to  
19 the public or the environment through the routine transport, use, or disposal of hazardous materials  
20 or the upset/accidental release of these materials. Thus, this effect would not be adverse.

21 **CEQA Conclusion:** Similar to Alternative 1A, construction of the water conveyance facilities under  
22 Alternative 7 presents the potential for a direct significant impact on construction personnel, the  
23 public and/or the environment associated with a variety of physical and chemical hazardous  
24 conditions because of the intensity of construction activities at the north Delta intakes, forebays and  
25 conveyance pipelines and tunnels and the hazardous materials that would be needed in these areas  
26 during construction. Potential hazards include the routine use of hazardous materials (as defined by  
27 Title 22 of the California Code of Regulations, Division 4.5); natural gas accumulation in water  
28 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment and  
29 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
30 electrical transmission lines; and hazardous constituents present in RTM. Under this alternative,  
31 however, only Intakes 2, 3 and 5 would be constructed. Thus, it is anticipated that effects associated  
32 with the transport and use of fuels for this alternative would be similar, but less severe, than those  
33 described for Alternative 1A. Many of these physical and chemical hazardous conditions would  
34 occur in close proximity to the towns of Hood and Courtland during construction of the north Delta  
35 intakes and the intermediate forebay. Additionally, the potential would exist for the construction of  
36 the water conveyance facilities to indirectly result in the release of hazardous materials through the  
37 disruption of existing road, rail, or river hazardous materials transport routes because construction  
38 would occur in the vicinity of three hazardous material transport routes, three railroad corridors,  
39 and waterways with barge traffic and would require construction traffic that could disrupt these  
40 routes. For these reasons, this is considered a significant impact. However, with the implementation  
41 of the previously described environmental commitments (e.g., SWPPPs, HMMPs, SPCCPs, SAPs, and a  
42 Barge Operations Plan) and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described  
43 in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*),  
44 construction of the water conveyance facilities would not create a substantial hazard to the public or  
45 the environment through the routine transport, use, or disposal of hazardous materials or the  
46 upset/accidental release of these materials. As such, these impacts would be less than significant.

1           **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2           **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3           **Construction Footprint, and Remediate and/or Contain Contamination**

4           Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5           1A.

6           **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 7           **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 8           **Dispose of Them in Accordance with Applicable Regulations**

9           Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 10          1A.

11          **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

12          Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 13          Chapter 20, *Public Services and Utilities*.

14          **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 15          **Minimizes Any Effect on Worker and Public Health and Safety**

16          Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 17          Chapter 20, *Public Services and Utilities*.

18          **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 19          **Plan**

20          Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 21          1A in Chapter 19, *Transportation*.

22          **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 23          **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 24          **Facilities**

25          **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
 26          an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
 27          pose a health hazard. However, no schools, parks or hospitals are located within 0.25 mile of  
 28          Alternative 7. Therefore, no sensitive receptors would be exposed to hazardous materials,  
 29          substances, or waste during construction of the water conveyance facilities under Alternative 7. As  
 30          such, there would be no effect. Potential air quality effects on sensitive receptors are discussed in  
 31          Chapter 22, *Air Quality and Greenhouse Gases*.

32          **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
 33          Alternative 7 water conveyance facilities alignment, therefore, there would be no impact due to  
 34          exposure of sensitive receptors to hazardous materials, substances or waste during construction of  
 35          the water conveyance facilities. Accordingly, there would be no impact. No mitigation is required.  
 36          Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
 37          *Greenhouse Gases*.

1 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 2 **Create a Significant Hazard to the Public or the Environment**

3 **NEPA Effects:** There are no “Cortese List” sites or known SOCs within the construction footprint of  
 4 Alternative 7 (Table 24-5 and Figure 24-4), and therefore there would be no conflict pertaining to a  
 5 known hazardous materials site during construction of the water conveyance facilities, and thus, no  
 6 related hazard to the public or the environment. For those hazardous materials sites identified  
 7 within the 0.5-mile radius but which are not within the construction footprint, there would be no  
 8 potential for construction of the water conveyance facilities to disturb those sites such that there  
 9 would be a re-release of hazardous materials that would create a hazard for the public or  
 10 environment. As such, there would be no effect. The potential for encountering unknown hazardous  
 11 materials sites during the course of construction is discussed under Impact HAZ-1.

12 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
 13 conveyance facility under this alternative, there would be no conflict with known hazardous  
 14 materials sites during construction of the water conveyance facilities, and therefore, no related  
 15 hazard to the public or the environment. As such, there would be no impact. No mitigation is  
 16 required. The potential for encountering unknown hazardous materials sites during the course of  
 17 construction is discussed under Impact HAZ-1.

18 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 19 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 20 **Study Area during Construction of the Water Conveyance Facilities**

21 **NEPA Effects:** Safety hazards to aircraft posed by high-profile construction equipment, such as  
 22 cranes and pile drivers, or structures (e.g., proposed transmission lines and towers), would be  
 23 similar to those described under Alternative 1A. Because Intake would not be constructed under this  
 24 alternative, these risks of construction of this intake (the potential use of tall cranes and pile drivers  
 25 for installation of the Intake 1) would not exist. However, because the Borges-Clarksburg, Spezia,  
 26 and Walnut Grove Airports (all private airstrips), and the Byron Airport (a public air facility), are  
 27 located within 2 miles of project features within the construction footprint that may not only require  
 28 the use of high-profile (200 feet or taller) construction equipment, but also the use of helicopters  
 29 (stringing of a proposed permanent 230-kV transmission line), there would be potential for adverse  
 30 effects on air safety.

31 However, as required, DWR would notify Caltrans’ Division of Aeronautics in writing prior to  
 32 construction of any state building or enclosure within 2 miles of these airports, as applicable, and  
 33 would comply with any Caltrans recommendations based on site investigation(s). Additionally, DWR  
 34 would comply with the recommendations of the OE/AAA (for Byron Airport) (14 CFR Part 77).  
 35 These actions would ensure that there are no adverse effects on air safety.

36 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 37 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 38 pipelines, for example, have the potential to result in safety hazards to aircraft during takeoff and  
 39 landing if the equipment is operated too close to runways. Three private airports (Borges-  
 40 Clarksburg, Spezia, and Walnut Grove Airports) and one public airport (Byron Airport) are located  
 41 within 2 miles of the construction footprint of Alternative 7. DWR would coordinate with Caltrans’  
 42 Division of Aeronautics prior to initiating construction and comply with its recommendations based  
 43 on its investigation(s), as well comply with the recommendations of the OE/AAA (for Byron  
 44 Airport). Compliance with these recommendations, which could include limitations necessary to

1 minimize potential problems, such as the use of temporary construction equipment, supplemental  
 2 notice requirements, and marking and lighting high-profile structures would reduce the potential  
 3 for impacts on air safety. Accordingly, impacts on air safety would be less than significant. No  
 4 mitigation is required.

5 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 6 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 7 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 8 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

9 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 10 Alternative 1A. The northernmost and southernmost extent of this conveyance alignment would be  
 11 adjacent to zones of moderate fire hazard severity.

12 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 13 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 14 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire  
 15 safety and prevention. Additionally, DWR would develop and implement fire prevention, safety and  
 16 control measures as part of a FPCP in coordination with federal, state, and local agencies.  
 17 Implementation of these would help ensure that people or structures would not be subject to a  
 18 significant risk of loss, injury or death involving wildland fires. Consequently, this effect would not  
 19 be adverse.

20 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 21 death involving wildland fires during construction or operation and maintenance of the water  
 22 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and  
 23 safety standards; DWR would implement standard fire safety and prevention measures, as part of a  
 24 FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
 25 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
 26 Therefore, this impact would be less than significant. No mitigation is required.

27 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 28 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 29 **Water Conveyance Facilities**

30 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
 31 conveyance facilities would be similar to those described for Alternative 1A. Under Alternative 7,  
 32 however, the potential for hazards associated with intake pumping plants and sediment basins  
 33 would be less widespread, because only three intake facilities would be operated and maintained.  
 34 Nonetheless, this alternative may require the transport, storage, and use of chemicals or hazardous  
 35 waste materials including fuel, oils, grease, solvents, and paints. Because the types of potentially  
 36 hazardous materials used during routine operation and maintenance activities would be used in  
 37 relatively small quantities, and because BMPs, as would be implemented in the SWPPPs, SPCCPs,  
 38 and HMMPs (as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), would be  
 39 in place to help prevent the inadvertent release of these materials and to contain and remediate  
 40 spills should they occur, the risk to the public and environment would be negligible and there would  
 41 be no adverse effect

42 Solids collected at solids lagoons and sediment dredged during intake maintenance may contain  
 43 hazardous constituents (e.g., persistent pesticides, mercury, PCBs). To ensure that potentially

1 contaminated sediment from maintenance dredging activities at the intakes would not adversely  
2 affect soil, groundwater or surface water, a SAP would be implemented prior to any dredging  
3 activities, as described under Impact HAZ-1 for this alternative. All sediment would be characterized  
4 chemically prior to reuse to ensure that reuse of this material would not result in a hazard to the  
5 public or the environment. Improper disposal of potentially contaminated (e.g., persistent pesticides  
6 and mercury) lagoon solids could result in contamination of soil, groundwater and surface water,  
7 which would be considered an adverse effect. However, with implementation of Mitigation Measure  
8 HAZ-6, solids from the solids lagoons would be sampled and characterized to evaluate disposal  
9 options, and disposed of accordingly at an appropriate, licensed facility in order to avoid an adverse  
10 effect on the environment due to potential contamination.

11 The locations of airports with respect to the pipeline/tunnel alignment are provided in Figure 24-9.  
12 The Borges-Clarksburg, Walnut Grove, and Spezia Airports (all private air facilities), and the Byron  
13 Airport (a public air facility) are located within 2 miles of the Alternative 7 construction footprint  
14 (Figure 24-9 and Table 24-6). With the exception of power transmission lines supplying power to  
15 pumps, surge towers, and other equipment used for water conveyance facilities operation and  
16 maintenance, water conveyance facilities operations and maintenance are not anticipated to require  
17 high-profile equipment, the use of which near an airport runway could result in an adverse effect on  
18 aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and coordinate with  
19 Caltrans' Division of Aeronautics prior to initiating maintenance activities requiring high-profile  
20 equipment to avoid adverse effects on air safety. Compliance with these recommendations, which  
21 could include limitations necessary to minimize potential problems, such as the use of temporary  
22 construction equipment, supplemental notice requirements, and marking and lighting high-profile  
23 structures would reduce the potential for impacts on air safety.

24 Potential releases of hazardous materials could result in an adverse effect on workers, the public  
25 (including sensitive receptors within 0.25 mile of the water conveyance facilities), and the  
26 environment. As with Alternative 1A, there are no sensitive receptors (i.e., schools, hospitals and  
27 parks) located within 0.25 mile of Alternative 7.

28 Therefore, with implementation of BMPs as part of environmental commitments and with  
29 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
30 facilities would not create a substantial hazard to the public or the environment and, accordingly,  
31 there would be no adverse effect.

32 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
33 operation and maintenance of the water conveyance facilities and the potential interference with air  
34 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
35 could have impacts on the public and environment. However, implementation of the BMPs and other  
36 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
37 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
38 when performing work with high-profile equipment within 2 miles of an airport, which would  
39 include implementation of recommendations to provide supplemental notice and/or equip high-  
40 profile structures with marking and lighting, would ensure that operation and maintenance of the  
41 water conveyance facilities would not create a substantial hazard to the public, environment or air  
42 traffic safety. Improper disposal of potentially contaminated (e.g., persistent pesticides and  
43 mercury) lagoon solids could result in contamination of soil, groundwater and surface water, which  
44 would be considered a significant impact. However, with implementation of Mitigation Measure  
45 HAZ-6, solids from the solids lagoons would be sampled and characterized to evaluate disposal

1 options, and disposed of accordingly at an appropriate, licensed facility in order to avoid a  
2 significant impact on the environment due to potential contamination.

3 Therefore, with implementation of BMPs as part of environmental commitments and with  
4 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
5 facilities would not create a substantial hazard to the public or the environment. Accordingly, this  
6 impact would be less than significant.

7 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
8 **and/or Disposal**

9 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
10 1A.

11 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
12 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
13 **CM13, CM14, CM16, CM18 and CM19**

14 *NEPA Effects:* The potential for construction, operation, and maintenance activities associated with  
15 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
16 workers, the public, and the environment would be similar to those described under Alternative 1A.  
17 Effects related to channel margin enhancement and seasonally-inundated floodplain restoration,  
18 however, would be more widespread under this alternative, because the targeted areas are larger  
19 under this alternative (approximately 40 miles and 20,000 acres, respectively, as compared with 20  
20 miles and 10,000 acres under Alternative 1A). Hazardous materials associated with the operation of  
21 construction equipment could be released into the environment in the course of the materials'  
22 routine transport, use, or disposal. Releases could also occur as a result of accidental circumstances.  
23 Similarly, construction activities could encounter known or unknown hazardous materials sites  
24 located on or in the vicinity of construction sites, creating the potential for their disturbance and  
25 release. Other activities, including the intentional demolition of existing structures (e.g., buildings)  
26 and reuse of spoil, dredged material and/or RTM, would also present the potential to generate  
27 hazards or release hazardous materials. However, prior to the reuse of spoils, dredged material or  
28 RTM, these materials would undergo chemical characterization, as described in Appendix 3B,  
29 *Environmental Commitments, AMMs, and CMs*, to ensure that they are not creating a hazard to the  
30 public and environment.

31 Further, other potential hazards that could result from implementing conservation measures  
32 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
33 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
34 release of hazardous substances during operation and maintenance (e.g., herbicides for nonnative  
35 vegetation control); the release, in the short-term, of pesticides from former agricultural lands as a  
36 result of wetland and floodplain restoration; the potential for safety hazards related to construction  
37 in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of construction  
38 sites.

39 These potential effects, were they to occur, would be considered adverse. However, the proposed  
40 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
41 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
42 suspected or has been verified. Additionally, with implementation of Mitigation Measures HAZ-1a,  
43 HAZ-1b, UT-6a, UT-6c, TRANS-1a, and environmental commitments (discussed previously for

1 Impacts HAZ-1 through HAZ-6, and in detail in Appendix 3B, *Environmental Commitments, AMMs,*  
 2 *and CMs*), the potential for substantial hazards to the public or environment would be reduced and,  
 3 accordingly, there would be no adverse effect.

4 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
 5 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

6 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
 7 public to hazardous substances or conditions during construction, operation, and maintenance of  
 8 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
 9 implementation would involve extensive use of heavy equipment during construction, and/or the  
 10 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
 11 for nonnative vegetation control). These chemicals could be inadvertently released, exposing  
 12 construction workers or the public to hazards. Construction of restoration projects on or near  
 13 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
 14 materials, and the use of high-profile equipment in close proximity to airport runways could result  
 15 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
 16 However, in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
 17 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
 18 ensure that these potential impacts would be less than significant.

19 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 20 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 21 **Construction Footprint, and Remediate and/or Contain Contamination**

22 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 23 1A.

24 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 25 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 26 **Dispose of Them in Accordance with Applicable Regulations**

27 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 28 1A.

29 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

30 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 31 Chapter 20, *Public Services and Utilities*.

32 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 33 **Minimizes Any Effect on Worker and Public Health and Safety**

34 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 35 Chapter 20, *Public Services and Utilities*.

36 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 37 **Plan**

38 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 39 1A in Chapter 19, *Transportation*.

1 **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 2 **Conservation Measures that Create or Improve Wildlife Habitat**

3 **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 4 wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 5 strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 6 from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 7 areas for restoration activities based on the location of the physical water conveyance features  
 8 associated with each alternative. Such variation may result greater or less opportunity for bird-  
 9 aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 10 because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 11 zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 12 Airport; Sacramento International Airport, and Byron Airport.

13 The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 14 because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 15 would reduce the severity of this effect through the development and implementation of measures  
 16 to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 17 adverse.

18 **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 19 habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 20 flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 21 significant impacts on public safety. The following airports, because they are in relatively close  
 22 proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 23 Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 24 Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 25 through the ultimate development and implementation of measures to reduce, minimize and/or  
 26 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 27 significant and unavoidable.

28 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 29 **Regulatory Agencies**

30 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 31 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 32 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 33 extent possible.

34 **24.3.3.15 Alternative 8—Dual Conveyance with Pipeline/Tunnel, Intakes 2,**  
 35 **3, and 5, and Increased Delta Outflow (9,000 cfs; Operational**  
 36 **Scenario F)**

37 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 38 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 39 **Conveyance Facilities**

40 **NEPA Effects:** Hazards to the public or the environment through the routine transport, use, or  
 41 disposal of hazardous materials during construction of the water conveyance facilities for Alternative

1 8 would be similar to those described under Alternative 1A. Under this alternative, however, only  
2 Intakes 2, 3, and 5 would be constructed. Thus, it is anticipated that effects associated with the  
3 transport and use of fuels for this alternative would be similar, but less severe, than those described  
4 for Alternative 1A.

5 Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil  
6 or groundwater, hazardous constituents present in RTM, infrastructure containing hazardous  
7 materials, and routine transportation of hazardous materials would be similar to those described  
8 under Alternative 1A. Because only Intakes 2, 3, and 5 would be built under this alternative,  
9 however, implementation would avoid any site-specific contaminants or hazardous materials  
10 associated with the construction of Intakes 1 and 4.

11 As with Alternative 1A, tunnel construction activities would carry the potential to encounter gases  
12 that could enter the tunnels and accumulate to flammable or explosive concentrations. Hazardous  
13 constituents associated with RTM are not anticipated; however, the possibility exists for RTM and  
14 decanted water to pose a hazard to the construction workers, the public, or the environment.  
15 Additionally, stored bulk quantities of hazardous materials that have been released to soils and  
16 groundwater could be rereleased during construction, also posing a potential hazard. Water  
17 conveyance facilities construction may also require dredging contaminated sediments. Existing  
18 infrastructure, including oil and gas wells, also have the potential to release hazardous materials, as  
19 would the transport of hazardous materials during facility construction.

20 The number of existing gas and petroleum product pipelines, and transmission lines within the  
21 proposed construction footprint of Alternative 8 would be the same as under Alternative 1A (Table  
22 24-3). The precise location of pipelines within a tunnel section would be identified prior to  
23 construction to avoid conflicts with shaft construction and disposal of RTM. Studies would be done  
24 prior to construction to identify the minimum allowable distance between existing gas wells and  
25 tunnel excavation. Abandoned wells would be tested to confirm that they have been abandoned  
26 according to DOGGR well abandonment requirements. Those wells not abandoned according to  
27 these requirements would be improved. In addition, to avoid the potential conflicts with shaft  
28 construction and disposal areas, the utility and infrastructure relocation would be coordinated with  
29 local agencies and owners.

30 Existing structures that would require relocation or removal under Alternative 8 would be the same  
31 as under Alternative 7. These structures may contain hazardous materials that would require  
32 proper handling and disposal, if demolition is necessary. As described for Impact HAZ-1 under  
33 Alternative 1A, Mitigation Measure HAZ-1b would be implemented by DWR to ensure that there are  
34 no adverse effects related to structure demolition due to hazardous materials.

35 As described for Alternative 1A under Impact HAZ-1, in general, the transportation of hazardous  
36 materials via trucks, trains and ships poses potential risks associated with the accidental release of  
37 these materials to the environment. Rerouting vehicular traffic carrying hazardous materials during  
38 construction of the water conveyance facilities could increase the risk of accidental release due to  
39 inferior road quality or lack of driver familiarity with the modified routes. Hazardous materials  
40 transportation routes are presented in Figure 24-2 and in Table 24-4. Routes anticipated to be  
41 affected during construction of the water conveyance facilities are described in Chapter 19,  
42 *Transportation*. Barges supporting water conveyance facilities construction may also transport  
43 hazardous materials such as fuels and lubricants or other chemicals. The potential exists for  
44 accidental release of hazardous materials from BDCP-related barges. To avoid effects on the

1 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
2 (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix 3B, *Environmental*  
3 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
4 materials during transport and transfer. Finally, under this alternative, the proposed conveyance  
5 would cross under the existing BNSF/Amtrak San Joaquin line between Bacon Island and Woodward  
6 Island; however, the effect of this crossing would likely be minimal because the proposed  
7 conveyance would traverse the railroad in a deep bore tunnel (see Chapter 19, *Transportation* for  
8 discussion). Further, the UPRR runs proximate to the construction area of the proposed Byron  
9 Forebay; however, construction is unlikely to disrupt rail service because much of this line has not  
10 been in service recently.

11 Mitigation measures would be in place to ensure that there are no adverse effects on road, rail, or  
12 water transportation, and, thus, the potential for the construction of the water conveyance facilities  
13 to pose risks related to the transportation of hazardous materials would be minimal. As described in  
14 Chapter 19, *Transportation*, under Mitigation Measure TRANS-1a, a site-specific construction traffic  
15 management plan, taking into account hazardous materials transportation, would be prepared and  
16 implemented prior to initiation of water conveyance facilities construction. Mitigation Measure  
17 TRANS-1a, would also include stipulations to coordinate with rail providers to develop alternative  
18 interim transportation modes (e.g., trucks or buses) that could be used to provide freight and/or  
19 passenger service during any longer term railroad closures and daily construction time windows  
20 during which construction would be restricted or rail operations would need to be suspended for  
21 any activity within railroad rights of way. This would minimize the potential risk of release of  
22 hazardous materials being transported via these rails.

23 As noted in the discussion of Impact HAZ-1 under Alternative 1A, project design would minimize, to  
24 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
25 is suspected or has been verified. Environmental commitments would be implemented, including  
26 SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical characterization of RTM  
27 prior to reuse (e.g., RTM in levee reinforcement) or discharge. Together, the environmental  
28 commitments would reduce these potential hazards associated with water conveyance facilities  
29 construction. Additionally, the implementation of Mitigation Measures HAZ-1a and HAZ-1b, UT-6a  
30 and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in  
31 Chapter 19, *Transportation*) would further reduce the potential severity of this impact. As such,  
32 construction of the water conveyance facilities would not create a substantial hazard to the public or  
33 the environment through the routine transport, use, or disposal of hazardous materials or the  
34 upset/accidental release of these materials. Thus, this effect would not be adverse.

35 **CEQA Conclusion:** Similar to Alternative 1A, construction of the water conveyance facilities under  
36 Alternative 7 presents the potential for a direct significant impact on construction personnel, the  
37 public and/or the environment associated with a variety of physical and chemical hazardous  
38 conditions because of the intensity of construction activities at the north Delta intakes, forebays and  
39 conveyance pipelines and tunnels and the hazardous materials that would be needed in these areas  
40 during construction. Potential hazards include the routine use of hazardous materials (as defined by  
41 Title 22 of the California Code of Regulations, Division 4.5); natural gas accumulation in water  
42 conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment and  
43 groundwater, or hazardous materials in existing infrastructure to be removed; disturbance of  
44 electrical transmission lines; and hazardous constituents present in RTM. Under this alternative,  
45 however, only Intakes 2, 3 and 5 would be constructed. Thus, it is anticipated that effects associated  
46 with the transport and use of fuels for this alternative would be similar, but less severe, than those

1 described for Alternative 1A. Many of these physical and chemical hazardous conditions would  
 2 occur in close proximity to the towns of Hood and Courtland during construction of the north Delta  
 3 intakes and the intermediate forebay. Additionally, the potential would exist for the construction of  
 4 the water conveyance facilities to indirectly result in the release of hazardous materials through the  
 5 disruption of existing road, rail, or river hazardous materials transport routes because construction  
 6 would occur in the vicinity of three hazardous material transport routes, three railroad corridors,  
 7 and waterways with barge traffic and would require construction traffic that could disrupt these  
 8 routes. For these reasons, this is considered a significant impact. However, with the implementation  
 9 of the previously described environmental commitments (e.g., SWPPPs, HMMPs, SPCCPs, and a  
 10 Barge Operations Plan) and Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described  
 11 in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*),  
 12 construction of the water conveyance facilities would not create a substantial hazard to the public or  
 13 the environment through the routine transport, use, or disposal of hazardous materials or the  
 14 upset/accidental release of these materials. As such, these impacts would be less than significant.

15 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 16 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 17 **Construction Footprint, and Remediate and/or Contain Contamination**

18 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 19 1A.

20 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 21 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 22 **Dispose of Them in Accordance with Applicable Regulations**

23 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 24 1A.

25 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

26 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 27 Chapter 20, *Public Services and Utilities*.

28 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 29 **Minimizes Any Effect on Worker and Public Health and Safety**

30 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 31 Chapter 20, *Public Services and Utilities*.

32 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 33 **Plan**

34 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 35 1A in Chapter 19, *Transportation*.

1 **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 2 **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 3 **Facilities**

4 **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
 5 an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
 6 pose a health hazard. However, no schools, parks or hospitals are located within 0.25 mile of  
 7 Alternative 8. Therefore, no sensitive receptors would be exposed to hazardous materials,  
 8 substances, or waste during construction of the water conveyance facilities under Alternative 8. As  
 9 such, there would be no effect. Potential air quality effects on sensitive receptors are discussed in  
 10 Chapter 22, *Air Quality and Greenhouse Gases*.

11 **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
 12 Alternative 8 water conveyance facilities alignment, therefore, there would be no impact due to  
 13 exposure of sensitive receptors to hazardous materials, substances or waste during construction of  
 14 the water conveyance facilities. Accordingly, there would be no impact. No mitigation is required.  
 15 Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
 16 *Greenhouse Gases*.

17 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 18 **Create a Significant Hazard to the Public or the Environment**

19 **NEPA Effects:** There are no "Cortese List" sites or known SOCs within the construction footprint of  
 20 Alternative 8 (Table 24-5 and Figure 24-4), and therefore there would be no conflict pertaining to a  
 21 known hazardous materials site during construction of the water conveyance facilities, and thus, no  
 22 related hazard to the public or the environment. For those hazardous materials sites identified  
 23 within the 0.5-mile radius but which are not within the construction footprint, there would be no  
 24 potential for construction of the water conveyance facilities to disturb those sites such that there  
 25 would be a re-release of hazardous materials that would create a hazard for the public or  
 26 environment. As such, there would be no effect. The potential for encountering unknown hazardous  
 27 materials sites during the course of construction is discussed under Impact HAZ-1.

28 **CEQA Conclusion:** Because there are no known SOCs within the construction footprint of the water  
 29 conveyance facility under this alternative, there would be no conflict with known hazardous  
 30 materials sites during construction of the water conveyance facilities, and therefore, no related  
 31 hazard to the public or the environment. As such, there would be no impact. No mitigation is  
 32 required. The potential for encountering unknown hazardous materials sites during the course of  
 33 construction is discussed under Impact HAZ-1.

34 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 35 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 36 **Study Area during Construction of the Water Conveyance Facilities**

37 **NEPA Effects:** Safety hazards to aircraft posed by high-profile construction equipment, such as  
 38 cranes and pile drivers, or structures (e.g., proposed transmission lines and towers), would be  
 39 similar to those described under Alternative 1A. Because Intake 1 and 4 would not be constructed  
 40 under this alternative, these risks of construction of these intakes (the potential use of tall cranes  
 41 and pile drivers for installation of Intakes 1 and 4) would not exist. However, because the Borges-  
 42 Clarksburg, Spezia, and Walnut Grove Airports (all private airstrips), and the Byron Airport (a public  
 43 air facility), are located within 2 miles of project features within the construction footprint that may

1 not only require the use of high-profile (200 feet or taller) construction equipment, but also the use  
 2 of helicopters (stringing of a proposed permanent 230-kV transmission line), there would be  
 3 potential for adverse effects on air safety.

4 However, as required, DWR would notify Caltrans' Division of Aeronautics in writing prior to  
 5 construction of any state building or enclosure within 2 miles of these airports, as applicable, and  
 6 would comply with any Caltrans recommendations based on site investigation(s). Additionally, DWR  
 7 would comply with the recommendations of the OE/AAA (for Byron Airport) (14 CFR Part 77).  
 8 These actions would ensure that there are no adverse effects on air safety.

9 **CEQA Conclusion:** The use of helicopters for stringing the proposed 230-kV transmission lines and  
 10 of high-profile construction equipment (200 feet or taller), such as cranes, for installation of  
 11 pipelines, for example, have the potential to result in safety hazards to aircraft during takeoff and  
 12 landing if the equipment is operated too close to runways. Three private airports (Borges-  
 13 Clarksburg, Spezia, and Walnut Grove Airports) and one public airport (Byron Airport) are located  
 14 within 2 miles of the construction footprint of Alternative 8. DWR would coordinate with Caltrans'  
 15 Division of Aeronautics prior to initiating construction and comply with its recommendations based  
 16 on its investigation(s), as well comply with the recommendations of the OE/AAA (for Byron  
 17 Airport). Compliance with these recommendations, which could include limitations necessary to  
 18 minimize potential problems, such as the use of temporary construction equipment, supplemental  
 19 notice requirements, and marking and lighting high-profile structures would reduce the potential  
 20 for impacts on air safety. Accordingly, impacts on air safety would be less than significant. No  
 21 mitigation is required.

22 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 23 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 24 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 25 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

26 **NEPA Effects:** Hazards related to wildland fires would be similar to those described under  
 27 Alternative 1A. The northernmost and southernmost extent of this conveyance alignment would be  
 28 adjacent to zones of moderate fire hazard severity.

29 As described under Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and*  
 30 *CMs*, precautions would be taken to prevent wildland fires during construction, and operation and  
 31 maintenance of the water conveyance facilities in full compliance with Cal-OSHA standards for fire  
 32 safety and prevention. Additionally, DWR would develop and implement fire prevention, safety and  
 33 control measures as part of a FPCP in coordination with federal, state, and local agencies.  
 34 Implementation of these would help ensure that people or structures would not be subject to a  
 35 significant risk of loss, injury or death involving wildland fires. Therefore, this effect would not be  
 36 adverse.

37 **CEQA Conclusion:** People or structures would not be subject to a significant risk of loss, injury or  
 38 death involving wildland fires during construction or operation and maintenance of the water  
 39 conveyance facilities because the alternative would comply with Cal-OSHA fire prevention and  
 40 safety standards; DWR would implement standard fire safety and prevention measures, as part of a  
 41 FPCP (Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because the water  
 42 conveyance facilities would not be located in a High or Very High Fire Hazard Severity Zone.  
 43 Therefore, this impact would be less than significant. No mitigation is required.

1 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
2 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
3 **Water Conveyance Facilities**

4 **NEPA Effects:** Potential hazards related to the long-term operation and maintenance of the water  
5 conveyance facilities would be similar to those described for Alternative 1A. Under this alternative,  
6 however, the potential for hazards associated with intake pumping plants and sediment basins  
7 would be less widespread, as only three intake facilities would be operated and maintained.  
8 Nonetheless, this alternative may require the transport, storage, and use of chemicals or hazardous  
9 waste materials including fuel, oils, grease, solvents, and paints. Because the types of potentially  
10 hazardous materials used during routine operation and maintenance activities would be used in  
11 relatively small quantities, and because BMPs, as would be implemented in the SWPPPs, SPCCPs,  
12 and HMMPs (detailed in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), would be in  
13 place to help prevent the inadvertent release of these materials and to contain and remediate spills  
14 should they occur, the risk to the public and environment would be negligible.

15 Solids collected at solids lagoons and sediment dredged during intake maintenance may contain  
16 hazardous constituents (e.g., persistent pesticides, mercury, PCBs). To ensure that potentially  
17 contaminated sediment from maintenance dredging activities at the intakes would not adversely  
18 affect soil, groundwater or surface water, a SAP would be implemented prior to any dredging  
19 activities, as described under Impact HAZ-1 for this alternative. All sediment would be characterized  
20 chemically prior to reuse to ensure that reuse of this material would not result in a hazard to the  
21 public or the environment. Improper disposal of potentially contaminated (e.g., persistent pesticides  
22 and mercury) lagoon solids could result in contamination of soil, groundwater and surface water,  
23 which would be considered an adverse effect. However, with implementation of Mitigation Measure  
24 HAZ-6, solids from the solids lagoons would be sampled and characterized to evaluate disposal  
25 options, and disposed of accordingly at an appropriate, licensed facility in order to avoid an adverse  
26 effect on the environment due to potential contamination.

27 The locations of airports with respect to the pipeline/tunnel alignment are provided in Figure 24-9.  
28 The Borges-Clarksburg, Walnut Grove, and Spezia Airports (all private facilities) and the Byron  
29 Airport (a public facility) would be within 2 miles of the Alternative 8 construction footprint (Figure  
30 24-9 and Table 24-6). With the exception of power transmission lines supplying power to pumps,  
31 surge towers, and other equipment used for water conveyance facilities operation and maintenance,  
32 water conveyance facilities operations and maintenance are not anticipated to require high-profile  
33 equipment, the use of which near an airport runway could result in an adverse effect on aircraft.  
34 DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and coordinate with Caltrans'  
35 Division of Aeronautics prior to initiating maintenance activities requiring high-profile equipment to  
36 avoid adverse effects on air safety. Compliance with these recommendations, which could include  
37 limitations necessary to minimize potential problems, such as the use of temporary construction  
38 equipment, supplemental notice requirements, and marking and lighting high-profile structures  
39 would reduce the potential for impacts on air safety.

40 Potential releases of hazardous materials could result in an adverse effect on workers, the public  
41 (including sensitive receptors within 0.25 mile of the water conveyance facilities), and the  
42 environment. As with Alternative 1A, there are no sensitive receptors (i.e., schools, hospitals and  
43 parks) located within 0.25 mile of Alternative 8.

1 Therefore, with implementation of BMPs as part of environmental commitments and with  
 2 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
 3 facilities would not create a substantial hazard to the public or the environment and, accordingly,  
 4 there would be no adverse effect.

5 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
 6 operation and maintenance of the water conveyance facilities and the potential interference with air  
 7 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
 8 could have impacts on the public and environment. However, implementation of the BMPs and other  
 9 activities required by SWPPPs, HMMPs, SPCCPs, SAPs, as well as adherence to all applicable FAA  
 10 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
 11 when performing work with high-profile equipment within 2 miles of an airport, which would  
 12 include implementation of recommendations to provide supplemental notice and/or equip high-  
 13 profile structures with marking and lighting, would ensure that operation and maintenance of the  
 14 water conveyance facilities would not create a substantial hazard to the public, environment or air  
 15 traffic safety. Improper disposal of potentially contaminated (e.g., persistent pesticides and  
 16 mercury) lagoon solids could result in contamination of soil, groundwater and surface water, which  
 17 would be considered a significant impact. However, with implementation of Mitigation Measure  
 18 HAZ-6, solids from the solids lagoons would be sampled and characterized to evaluate disposal  
 19 options, and disposed of accordingly at an appropriate, licensed facility in order to avoid a  
 20 significant impact on the environment due to potential contamination.

21 Therefore, with implementation of BMPs as part of environmental commitments and with  
 22 implementation of Mitigation Measure HAZ-6, operation and maintenance of the water conveyance  
 23 facilities would not create a substantial hazard to the public or the environment. Accordingly, this  
 24 impact would be less than significant.

25 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 26 **and/or Disposal**

27 Please refer to Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative  
 28 1A.

29 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 30 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 31 **CM13, CM14, CM16, CM18 and CM19**

32 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 33 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 34 workers, the public, and the environment would be similar to those described under Alternative 1A  
 35 but could differ based upon different target acreages chosen for habitat restoration or enhancement.  
 36 Hazardous materials associated with the operation of construction equipment could be released into  
 37 the environment in the course of the materials' routine transport, use, or disposal. Releases could  
 38 also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
 39 known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
 40 creating the potential for their disturbance and release. Other activities, including the intentional  
 41 demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM,  
 42 would also present the potential to generate hazards or release hazardous materials. However, prior  
 43 to the reuse of spoils, dredged material or RTM, these materials would undergo chemical

1 characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, to  
2 ensure that they are not creating a hazard to the public and environment.

3 Further, other potential hazards that could result from implementing conservation measures  
4 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
5 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
6 release of hazardous substances during operation and maintenance (e.g., herbicides for nonnative  
7 vegetation control); the release, in the short-term, of pesticides from former agricultural lands as a  
8 result of wetland and floodplain restoration; the potential for safety hazards related to construction  
9 in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of construction  
10 sites.

11 These potential effects, were they to occur, would be considered adverse. However, the proposed  
12 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
13 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
14 suspected or has been verified. Additionally, with implementation of Mitigation Measures HAZ-1a,  
15 HAZ-1b, UT-6a, UT-6c, TRANS-1a, and environmental commitments (discussed previously for  
16 Impacts HAZ-1 through HAZ-6, and in detail in Appendix 3B, *Environmental Commitments, AMMs,*  
17 *and CMs*), the potential for substantial hazards to the public or environment would be reduced and,  
18 accordingly, there would be no adverse effect.

19 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
20 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

21 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
22 public to hazardous substances or conditions during construction, operation, and maintenance of  
23 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
24 implementation would involve extensive use of heavy equipment during construction, and/or the  
25 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
26 for nonnative vegetation control). These chemicals could be inadvertently released, exposing  
27 construction workers or the public to hazards. Construction of restoration projects on or near  
28 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
29 materials, and the use of high-profile equipment in close proximity to airport runways could result  
30 in hazards to air traffic. These effects, were they to occur, would be considered a significant impact.  
31 However in addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and a FPCP, Mitigation  
32 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented, all of which would  
33 ensure that these potential impacts would be less than significant.

34 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
35 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
36 **Construction Footprint, and Remediate and/or Contain Contamination**

37 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
38 1A.

1       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 2       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 3       **Dispose of Them in Accordance with Applicable Regulations**

4       Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 5       1A.

6       **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

7       Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 8       Chapter 20, *Public Services and Utilities*.

9       **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 10       **Minimizes Any Effect on Worker and Public Health and Safety**

11       Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 12       Chapter 20, *Public Services and Utilities*.

13       **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 14       **Plan**

15       Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 16       1A in Chapter 19, *Transportation*.

17       **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 18       **Conservation Measures that Create or Improve Wildlife Habitat**

19       **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 20       wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 21       strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 22       from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 23       areas for restoration activities based on the location of the physical water conveyance features  
 24       associated with each alternative. Such variation may result greater or less opportunity for bird-  
 25       aircraft strikes depending on the location's proximity to airport flight zones. The following airports,  
 26       because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 27       zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 28       Airport; Sacramento International Airport, and Byron Airport.

29       The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 30       because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 31       would reduce the severity of this effect through the development and implementation of measures  
 32       to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 33       adverse.

34       **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 35       habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 36       flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 37       significant impacts on public safety. The following airports, because they are in relatively close  
 38       proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 39       Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 40       Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact

1 through the ultimate development and implementation of measures to reduce, minimize and/or  
 2 avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 3 significant and unavoidable.

4 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 5 **Regulatory Agencies**

6 Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 7 1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 8 a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 9 extent possible.

10 **24.3.3.16 Alternative 9—Through Delta/Separate Corridors (15,000 cfs;**  
 11 **Operational Scenario G)**

12 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 13 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 14 **Conveyance Facilities**

15 *NEPA Effects:* This impact describes and addresses, for the duration of construction of the water  
 16 conveyance facilities, potential hazards associated with the routine use of hazardous materials;  
 17 existing contaminants in soil, groundwater or sediment; hazardous constituents present in dredged  
 18 sediments; infrastructure containing hazardous materials; and the routine transport of hazardous  
 19 materials.

20 Under Alternative 9, three locations would be designated as temporary fuel stations, each occupying  
 21 2 acres and located adjacent to concrete batch plants. Potential hazards resulting from these  
 22 facilities would be similar to those described under Alternative 1A but would be reduced in their  
 23 intensity because three fuel stations would be used instead of five. Additionally, these potential  
 24 hazards would occur in different locations. Fuel stations would be established in currently rural  
 25 areas with one just northwest of the town of Locke, one near the San Joaquin River on the eastern  
 26 side of Webb Tract near Potato Slough, and one on State Highway 4, approximately 3 miles  
 27 northeast of Clifton Court Forebay. Fuel station locations are shown in Figure 24-7 and in Figure M3-  
 28 5 in the Mapbook Volume.

29 In addition to fuel use and bulk fuel storage, construction activities and maintenance of construction  
 30 equipment for the water conveyance facilities under this alternative would include storage and use  
 31 of similar hazardous materials—with associated potential for spills and releases—as described  
 32 under Alternative 1A. To the extent that activities would require different materials and different  
 33 amounts of materials for construction of operable barriers and intakes structures under this  
 34 alternative, the intensity of this effect would be different. This alternative would, however, avoid  
 35 hazards associated with construction of three intake facilities, three pumping plants, pipelines, and  
 36 tunnels. However, in-river facility construction associated with operable barriers and intakes would  
 37 be more extensive and widespread under this alternative, which could result in a greater potential  
 38 for hazardous materials to be spilled or otherwise released to the environment, particularly to water  
 39 bodies. Construction equipment maintenance is expected to be performed in the field and in central  
 40 maintenance facilities operated by contractors during construction of this alternative. While  
 41 equipment could be maintained at any work area identified for this alternative, the highest risk of  
 42 hazards related to equipment maintenance activities would be anticipated to occur at those sites

1 where duration and intensity of construction activities would be greatest, including intake sites  
2 (Delta Cross Channel and Georgiana Slough) and operable barrier sites (a detailed depiction of the  
3 Through Delta/Separate Corridors alignment features is provided in Figure M3-5 in the Mapbook  
4 Volume).

5 The potential hazards resulting from construction activities near known (see Impact HAZ-3 for this  
6 alternative below) or unknown SOCs would be similar to those described under Alternative 1A.  
7 Additionally, contaminated soil, groundwater, or sediments may be encountered during dredging  
8 and other in-river construction activities. Approximately 11.9 million cubic yards of dredged  
9 sediment spoils are expected to be generated in the southern portion of the study area, and  
10 additional sediment would be generated during construction of intakes, operable barriers, and other  
11 in-channel infrastructure (California Department of Water Resources 2010b:16-5). Contaminated  
12 sediments (e.g., persistent pesticide- and mercury-contaminated sediments) may be encountered  
13 during in-river construction (e.g., cofferdam construction at fish screen sites). As indicated under  
14 Impact HAZ-1 for Alternative 1A, concentrations of potential contaminants in the sediments where  
15 in-river construction activities would be taking place are not known; therefore, the associated risk  
16 cannot be identified. Generally, mobilization of potentially contaminated sediments would be  
17 directly related to levels of turbidity and suspended sediments resulting from construction.  
18 Although resulting turbidity has not been modeled, it is anticipated to be low given the permit  
19 requirements for controls stipulating that dredging activities be conducted and monitored such that  
20 turbidity not increase in receiving waters, measured 300 feet downstream or that silt curtains be  
21 used to control turbidity and reduce the associated mobilization of potentially contaminated  
22 sediments. Mobilization of potentially contaminated sediments are unlikely to be a hazard concern  
23 for construction workers because it is not expected that workers would be in direct contact with  
24 sediments during in-river construction activities. Similarly, contaminated sediments are unlikely to  
25 pose a hazard to the general public or the environment because suspended sediment would be  
26 confined to the areas of in-river disturbance via the incorporation of BMPs, such as the installation  
27 of silt curtains and the performance of in-water work during low flow periods (see Appendix 3B,  
28 *Environmental Commitments, AMMs, and CMs*), and because disturbance would be temporary  
29 (occurring during in-river work and potentially for a few hours following cessation of in-river  
30 construction activities).

31 Infrastructure and structures in the study area containing hazardous materials cross the Alternative  
32 9 water conveyance alignment and construction footprint (Figures 24-3 and 24-6). Five overhead  
33 high-voltage electrical transmission lines, one petroleum product pipeline, and potentially other  
34 local power and gas lines cross the construction footprint for the proposed water conveyance  
35 facilities. Table 24-3 provides the number and type of regional electrical transmission lines and  
36 pipelines crossing each alternative alignment. Local power lines and residential gas distribution  
37 lines may be present in the area.

38 Construction of the proposed water conveyance facilities under Alternative 9 (particularly the canal  
39 and intake facilities) would also conflict with a substantial number of existing structures throughout  
40 the alignment, but particularly on and near Hammer Island. Construction of the water conveyance  
41 facility under this alternative would require the removal 255 structures, of which 74 are residential  
42 and 93 are storage/support structures. This would be necessary for the modification of channels  
43 and the construction of new levees south of Clifton Court Forebay. These structures may contain  
44 hazardous materials that would require proper handling and disposal, if demolition is necessary.  
45 Disturbance of this infrastructure during construction of the water conveyance facilities could result  
46 in hazards similar to those described under Alternative 1A. As described for Impact HAZ-1 under

1 Alternative 1A, Mitigation Measure HAZ-1b would be implemented by DWR to ensure that there are  
2 no adverse effects related to hazardous materials from structure demolition.

3 Risks associated with the transportation of hazardous materials via truck, trains, and ships would be  
4 similar to those described under Alternative 1A but would occur in different areas. State Highway 4,  
5 a designated hazardous materials transportation route, crosses the alignment for Alternative 9 at  
6 Middle River (Figure 24-2 and in Table 24-4). Rerouting vehicular traffic carrying hazardous  
7 materials during construction of the water conveyance facilities could increase the risk of accidental  
8 release due to inferior road quality or lack of driver familiarity with the modified routes. This  
9 includes the risk of release of hazardous products or wastes being transported routinely or  
10 specifically for construction of the water conveyance facilities, and the corresponding risk of release  
11 of fuels (gasoline and diesel) from vehicular accidents. No rerouting of traffic on this highway is  
12 anticipated. Other road routes anticipated to be affected during construction of the water  
13 conveyance facilities are listed in Chapter 19, *Transportation*. As described in Chapter 19,  
14 *Transportation*, under Mitigation Measure TRANS-1a, a site-specific construction traffic  
15 management plan would be prepared and implemented prior to initiation of water conveyance  
16 facilities construction. This plan would include stipulations and BMPs to avoid or reduce potential  
17 circulation effects, such as such as providing signage, barricades, and flag people around  
18 construction work zones; notifying the public, including schools and emergency service providers of  
19 construction activities that could affect transportation; providing alternate access routes, if  
20 necessary, to maintain continual circulation in and around construction zones; and requiring direct  
21 haulers to pull over in the event of an emergency, which would help ensure that there are no  
22 interferences with the safe transport of hazardous materials and no associated increases in safety  
23 hazards. In-water construction of the operable barriers and barge unloading facilities could result in  
24 impediments to marine traffic on the San Joaquin River, which could have the potential to introduce  
25 hazards in the case of inadvertent collisions, and releases of hazardous materials (e.g., fuels) from  
26 barges or other watercraft. However, as described under Impact HAZ-1 for Alternative 1A, BMPs  
27 implemented as part of a Barge Operations Plan (for detail see Appendix 3B, *Environmental*  
28 *Commitments, AMMs, and CMs*) would avoid and/or minimize this potential adverse effect. Train  
29 operations along the BNSF Railway/Amtrak San Joaquin Line could be affected during construction  
30 of the proposed operable barrier at the Middle River entrance of the Railroad Cut (between the  
31 Middle River and the Old River) under this alternative. To avoid potential adverse effects on rail  
32 modes of transportation, DWR would consult with railroad owners and would develop and  
33 implement rail construction management plans, as necessary, through implementation of Mitigation  
34 Measure TRANS-6 (described in Chapter 19, *Transportation*).

35 In summary, during construction of the water conveyance facilities there is the potential for direct  
36 effects on construction personnel, the public and the environment associated with the routine use of  
37 hazardous materials; the inadvertent release of existing contaminants in soil and groundwater, or  
38 hazardous materials in existing infrastructure to be removed; disturbance of electrical transmission  
39 lines; and potentially hazardous constituents present in dredged sediments. Additionally, there is  
40 the potential for the construction of the water conveyance facilities to indirectly result in the release  
41 of hazardous materials through the disruption of existing road, rail, or river hazardous materials  
42 transport routes because construction would occur in the vicinity of one designated hazardous  
43 materials transport route, one railroad corridor and waterways with barge traffic, and would  
44 require construction traffic that could disrupt these routes, which, were this to occur, would be  
45 considered an adverse effect.

1 However, as noted in the discussion of Impact HAZ-1 for Alternative 1A, project design would  
 2 minimize, to the extent feasible, the need to acquire or traverse areas where the presence of  
 3 hazardous materials is suspected or has been verified. Additionally, environmental commitments  
 4 would be implemented, including, but not limited to BMPs implemented as part of SWPPPs, SPCCPs,  
 5 SAPs and HMMPs, and a Barge Operations Plan. Together, the environmental commitments would  
 6 reduce these potential hazards associated with water conveyance facilities construction.  
 7 Additionally, the implementation of Mitigation Measures HAZ-1a and HAZ-1b; UT-6a and UT-6c  
 8 (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19,  
 9 *Transportation*) would further reduce the potential severity of this impact. As such, construction of  
 10 the water conveyance facilities would not create a substantial hazard to the public or the  
 11 environment through the routine transport, use, or disposal of hazardous materials or the  
 12 upset/accidental release of these materials. Thus, this effect would not be adverse.

13 **CEQA Conclusion:** During construction of the water conveyance facilities there is the potential for  
 14 direct significant impacts on construction personnel, the public and the environment associated  
 15 with a variety of hazardous physical or chemical conditions. Such conditions may arise as a result of  
 16 the intensity and duration of construction activities at the intakes, operable barriers, and channel  
 17 modification, and because of the hazardous materials that would be used in these areas during  
 18 construction. Potential hazards would include the routine use of hazardous materials (as defined by  
 19 Title 22 of the California Code of Regulations, Division 4.5); the inadvertent release of existing  
 20 contaminants in soil, sediment and groundwater, or hazardous materials in existing infrastructure  
 21 to be removed; disturbance of electrical transmission lines; and hazardous constituents present in  
 22 dredged sediments. Additionally, there is the potential for the construction of the water conveyance  
 23 facility to indirectly result in the release of hazardous materials through the disruption of existing  
 24 road, rail, or river hazardous materials transport routes because construction would occur in the  
 25 vicinity of one designated hazardous materials transport route, one railroad corridor and  
 26 waterways with barge traffic, and would require construction traffic that could disrupt these routes.  
 27 For these reasons, this is considered a significant impact. However, with the implementation of the  
 28 previously described environmental commitments for Impact HAZ-1 under Alternative 1A and of  
 29 Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services  
 30 and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), construction of the water  
 31 conveyance facilities would not create a substantial hazard to the public or the environment through  
 32 the routine transport, use, or disposal of hazardous materials or the upset/accidental release of  
 33 these materials. The severity of this impact would be reduced with the implementation of these  
 34 environmental commitments and mitigation measures by identifying and describing potential  
 35 sources of hazardous materials so that releases can be avoided and materials can be properly  
 36 handled; detailing practices to monitor pollutants and control erosion so that appropriate measures  
 37 are taken; implementing onsite features to minimize the potential for hazardous materials to be  
 38 released to the environment or surface waters; minimizing risk associated with the relocation of  
 39 utility infrastructure; and coordinating the transport of hazardous materials to reduce the risk of  
 40 spills. Accordingly, these impacts would be reduced to a less-than-significant level.

41 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 42 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 43 **Construction Footprint, and Remediate and/or Contain Contamination**

44 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 45 1A.

1       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 2       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 3       **Dispose of Them in Accordance with Applicable Regulations**

4       Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 5       1A.

6       **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

7       Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 8       Chapter 20, *Public Services and Utilities*.

9       **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 10       **Minimizes Any Effect on Worker and Public Health and Safety**

11       Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 12       Chapter 20, *Public Services and Utilities*.

13       **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 14       **Plan**

15       Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 16       1A in Chapter 19, *Transportation*.

17       **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 18       **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 19       **Facilities**

20       **NEPA Effects:** The potential for hazardous materials or substances to affect sensitive receptors  
 21       would be similar in nature to those described for Alternative 1A; however, implementation of this  
 22       alternative would potentially affect parks, schools, or hospitals in different locations. While there are  
 23       no parks or hospitals located within 0.25 mile of Alternative 9, Walnut Grove Elementary School in  
 24       Walnut Grove is within 0.25 mile of the construction footprint, near the proposed Georgiana Slough  
 25       and Delta Cross Channel screened intakes, as shown in Figure 24-8.

26       Construction of the intakes would require the use of heavy construction equipment, including  
 27       cranes, excavators, loaders, and off-road trucks, which would require the routine use of hazardous  
 28       materials such as fuels, solvents, and lubricants. Construction of the intakes and construction-  
 29       related activities, such as fueling, excavation, and site clearing, could potentially release hazardous  
 30       materials into the environment through equipment leaks and upset and accident conditions  
 31       involving accidental spills. However, the inadvertent release of the types and quantities of  
 32       hazardous materials that would be used during construction activities in this area would likely only  
 33       have the potential to result in minor, temporary hazards to workers immediately adjacent to these  
 34       releases. Because chemicals such as fuels and solvents that could be used in this area would be used  
 35       in small quantities, and any inadvertent release would be localized, and because BMPs to minimize  
 36       the potential for the accidental release of hazardous materials and to contain and remediate  
 37       hazardous spills, as part of the SWPPPs, SPCCPs, and HMMPs, would be implemented, as described  
 38       in Section 24.3.3.2 under "Routine Use of Hazardous Materials" for Alternative 1A, and as set forth in  
 39       Appendix 3B, *Environmental Commitments, AMMs, and CMs*, children and staff at Walnut Grove  
 40       Elementary School would not be exposed to hazardous materials, substances, or waste during

1 construction of the water conveyance facilities. Therefore, there would be no adverse effect.  
 2 Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
 3 *Greenhouse Gases*.

4 **CEQA Conclusion:** Walnut Grove Elementary School is within 0.25 mile of the construction footprint  
 5 for Alternative 9 near the sites of the proposed intakes at the Delta Cross Channel and Georgiana  
 6 Slough. Construction of the intakes and construction-related activities, such as fueling, excavation,  
 7 and site clearing, could potentially release hazardous materials into the environment through  
 8 equipment (e.g., dump trucks, diggers, cranes, and back hoes) equipment leaks and upset and  
 9 accident conditions involving accidental spills. However, the inadvertent release of the types and  
 10 quantities of hazardous materials that would be used during construction activities in this area  
 11 would likely only have the potential to result in minor, temporary hazards to workers immediately  
 12 adjacent to these releases. Risks would also be reduced because chemicals such as fuels and solvents  
 13 that could be used in this area would be used in small quantities, any inadvertent release would be  
 14 localized, and because BMPs would be implemented to minimize the potential for the accidental  
 15 release of hazardous materials and to contain and remediate hazardous spills, as part of the  
 16 SWPPPs, SPCCPs, and HMMPs (as discussed under Impact HAZ-1 for Alternative 1A and in Appendix  
 17 3B, *Environmental Commitments, AMMs, and CMs*). Further, the school is not in close enough  
 18 proximity to these proposed construction areas to be affected by potential hazards such as minor  
 19 leaks or spills of hazardous materials. Therefore, school children and staff at Walnut Grove  
 20 Elementary School would not be at risk or affected by exposure to hazardous materials, substances,  
 21 or waste during construction of the water conveyance facilities, and as such, this impact would be  
 22 less than significant. No mitigation is required. Potential air quality effects on sensitive receptors are  
 23 discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

24 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 25 **Create a Significant Hazard to the Public or the Environment**

26 **NEPA Effects:** As shown in Table 24-5 and in Figure 24-4, four SOCs would be located within 0.5  
 27 mile of the construction footprint for Alternative 9. For those hazardous materials sites identified  
 28 within the 0.5-mile radius but which are not within the construction footprint, there would be no  
 29 potential for construction of the water conveyance facilities to disturb those sites such that there  
 30 would be a re-release of hazardous materials that would create a hazard for the public or  
 31 environment. However, one of these sites is within the Delta Cross Channel intake construction  
 32 footprint of Alternative 9. This is the site of the former Unocal Bulk Plant—a bulk storage and  
 33 distribution facility for petroleum products (1922 to 1980) with 11 ASTs and underground  
 34 pipelines. The latest monitoring report from third quarter 2008 indicates that groundwater at this  
 35 site contains petroleum product concentrations exceeding cleanup standards. Because dewatering  
 36 wells would likely be necessary during construction of the Delta Cross Channel intake, it is possible  
 37 that the dewatering system would draw up contaminated groundwater associated with the Unocal  
 38 Bulk Plant site. If contaminated groundwater was drawn up and released to the environment, this  
 39 would be an adverse effect. As a result, it would be necessary to characterize the groundwater  
 40 drawn through the dewatering system to determine disposal options to avoid any adverse effect on  
 41 the environment via improper disposal of contaminated groundwater. Implementation of Mitigation  
 42 Measure HAZ-1a, as described for Impact HAZ-1 under Alternative 1A, would avoid this adverse  
 43 effect by requiring soil and groundwater testing at this site, and containment and/or remediation if  
 44 contamination is present. Therefore, there would be no adverse effect. There are no “Cortese List”  
 45 sites within the construction footprint of the Alternative 9 water conveyance facilities. The potential

1 for encountering unknown hazardous materials sites during the course of construction is discussed  
2 under Impact HAZ-1.

3 **CEQA Conclusion:** The former Unocal Bulk Plant is within the construction footprint for the Delta  
4 Cross Channel intake under Alternative 9. Recent monitoring indicates that groundwater at Unocal  
5 Bulk Plant site contains concentrations of petroleum products exceeding cleanup standards.  
6 Because dewatering wells would likely be necessary during construction of the Delta Cross Channel  
7 intake, it is possible that the dewatering system would draw up contaminated groundwater  
8 associated with the Unocal Bulk Plant site. The potential for a significant hazard to the public or the  
9 environment as a result of the potential re-release of hazardous materials contained in groundwater  
10 during construction near this hazardous materials site would be less than significant with  
11 implementation of Mitigation Measure HAZ-1a, which would require soil and groundwater testing  
12 and containment and/or remediation if contamination is present; thus, improper disposal of  
13 contaminated groundwater or soil would be avoided and the public and environment would not be  
14 affected. The potential for construction activities to encounter unknown sites hosting hazardous  
15 materials is described under Impact HAZ-1.

16 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
17 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
18 **Construction Footprint, and Remediate and/or Contain Contamination**

19 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
20 1A. Implementation of this measure will result in the successful remediation or containment of  
21 all known or suspected contaminated areas, as applicable, within the construction footprint,  
22 which would prevent the release of hazardous materials from these areas into the environment.

23 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
24 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
25 **Study Area during Construction of the Water Conveyance Facilities**

26 **NEPA Effects:** As previously described, development around an airport, particularly in the approach  
27 and departure paths, can create obstructions in the airspace traversed by an approaching or  
28 departing aircraft. Additionally, certain land uses have the potential to create hazards to aircraft  
29 such as a distracting glare, smoke, steam, or invisible heat plumes. Safety impacts from aircraft  
30 accidents near airports are typically avoided by specifying the types of land uses allowed, and  
31 thereby limiting the number of people who would be exposed to the risk of an accident, and avoiding  
32 land uses that could create hazards to air traffic. Airspace protection primarily involves limitations  
33 on the height of objects on the ground near airports.

34 The nature of safety hazards related to air travel would be similar to those described under  
35 Alternative 1A. However, under Alternative 9, the water conveyance facilities would be within 2  
36 miles of the Walnut Grove and Spezia Airports, southwest of Walnut Grove, as shown in Figure 24-9.  
37 These airports are designated private airports. Walnut Grove Airport is within 2 miles of a proposed  
38 borrow and/or spoils area, near the intake proposed at Georgiana Slough. Spezia Airport is within 2  
39 miles of several proposed features for the water conveyance facility under Alternative 9: intake and  
40 intake work area at Georgiana Slough; borrow and/or spoils area; 12-kV transmission line; and a  
41 fish screen work area. With the exception of the intake, potentially the intake work area, and the fish  
42 screen (pile driving), construction of these features or work in these areas would not require the use  
43 of high-profile (200 feet or taller) construction equipment. It is not yet known what the maximum

1 height of the high-profile construction equipment that would be used would be. Tower cranes, for  
 2 example, may be required, and a typical tower crane can have a total height greater than 200 feet—a  
 3 height that could be considered an obstruction or hazard to navigable air space if located near an  
 4 airport. However, because, as required, Caltrans' Division of Aeronautics would be informed in  
 5 writing by DWR of the construction of any state building or enclosure within 2 miles of these  
 6 airports, and because DWR would adhere to any recommendations resulting from Caltrans' review,  
 7 there would be no adverse effects on air safety.

8 **CEQA Conclusion:** High-profile construction equipment (200 feet or taller), such as tall cranes, for  
 9 installation of intakes, and pile drivers, such as would be used during the installation of the fish  
 10 screen at Georgiana Slough construction of the intakes, have the potential to result in safety hazards  
 11 to aircraft during takeoff and landing if the equipment is operated too close to runways. Two private  
 12 airports (Spezia and Walnut Grove Airports) are located within 2 miles of the construction footprint  
 13 of Alternative 9. DWR would coordinate with Caltrans' Division of Aeronautics prior to initiating  
 14 construction and comply with its recommendations based on their investigation(s). These  
 15 recommendations, which could include limitations necessary to minimize potential problems, such  
 16 as the use of temporary construction equipment, supplemental notice requirements, and marking  
 17 and lighting high-profile structures would reduce the potential for impacts on air safety.  
 18 Accordingly, this impact would be less than significant. No mitigation is required.

19 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 20 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 21 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 22 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

23 **NEPA Effects:** Under Alternative 9, potential hazards related to wildland fire would be similar to  
 24 those described under Impact HAZ-5 for Alternative 1A but would carry the potential to affect  
 25 different areas. As shown in Figure 24-10, no portion of Alternative 9 is located in or near an area  
 26 designated as a High or Very High Fire Hazard Severity Zone. Figure 24-10 indicates the  
 27 northernmost and southernmost portions of Alternative 9 would be near Moderate Fire Hazard  
 28 Severity Zones. The study area mainly consists of agricultural lands with pockets of rural residential  
 29 land uses that are not adjacent to wildlands, as well as residential areas that are intermixed with  
 30 wildlands.

31 As described under Impact HAZ-5 for Alternative 1A and in Appendix 3B, *Environmental*  
 32 *Commitments, AMMs, and CMs*, BMPs would be implemented, as part of an FPCP, to prevent and  
 33 control wildland fires during construction, and operation and maintenance of the water conveyance  
 34 facilities in full compliance with Cal-OSHA fire prevention and safety standards. Development and  
 35 implementation of the FPRP would help ensure that people or structures would not be subject to a  
 36 significant risk of loss, injury or death involving wildland fires. Therefore, this effect would not be  
 37 adverse.

38 **CEQA Conclusion:** People or structures would not be subject to a substantial risk of loss, injury or  
 39 death involving wildland fires during construction or operation and maintenance of the water  
 40 conveyance facilities because the BDCP would comply with Cal-OSHA fire prevention and safety  
 41 standards; would implement standard fire safety, control and prevention measures, as part of a  
 42 FPCP; and because the water conveyance facilities would not be located in a High or Very High Fire  
 43 Hazard Severity Zone. Therefore, this impact would be less than significant. No mitigation is  
 44 required.

1 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 2 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 3 **Water Conveyance Facilities**

4 **NEPA Effects:** During long-term operation and maintenance of the water conveyance facilities, the  
 5 transport, storage, and use of chemicals or hazardous waste materials may be required. In many  
 6 cases, potential hazards would occur in a similar manner to those described for Alternative 1A.  
 7 However, hazards would differ in intensity based upon the different structures and locations that  
 8 compose the water conveyance facilities under this alternative. Operation and maintenance of  
 9 several water conveyance facilities (e.g., intake screens, pumps, and operable gates) would require  
 10 the use of hazardous materials, such as fuel, oils, grease, solvents, and paints. For example, planned  
 11 maintenance at pumping facilities would include checking oil levels or replacing oil in the pumps  
 12 and greasing pump bearings. Additionally, routine facility maintenance would include painting of  
 13 pumping plants and appurtenant structures, cleaning, repairs, and other routine tasks that ensure  
 14 the facilities are operated in accordance with design standards. Replacement of erosion protection  
 15 on the levees and embankments would also occur periodically. The potential severity of hazards  
 16 arising from the collection of sediment in pumping plants is anticipated to be significantly smaller  
 17 than described under Alternative 1A because of the significantly smaller collective diversion  
 18 capacity of the plants that would be built for Alternative 9 (two plants, each diverting a maximum of  
 19 250 cfs, rather than five plants). However, dredging activities associated with maintenance of  
 20 intakes and operable barriers, could produce a considerable volume of potentially-contaminated  
 21 sediment. To ensure that potentially contaminated sediment from maintenance dredging activities  
 22 at the intakes would not adversely affect soil, groundwater or surface water, a SAP would be  
 23 implemented prior to any dredging activities, as described under Impact HAZ-1 for this alternative.  
 24 All sediment would be characterized chemically prior to reuse to ensure that reuse of this material  
 25 would not result in a hazard to the public or the environment.

26 As previously discussed, Walnut Grove Elementary School is within 0.25 mile of the construction  
 27 footprint for Alternative 9, between the two proposed intakes at the Delta Cross Channel and  
 28 Georgiana Slough. There are no other sensitive receptors (i.e., hospitals and parks) located within  
 29 0.25 mile of this alternative. As discussed under Impact HAZ-2, should hazardous materials be  
 30 inadvertently released during routine operations and maintenance at the constructed facilities due  
 31 to the improper handling of hazardous materials or from vehicles traveling to or from the facilities,  
 32 there would be a potential risk to school children and staff. However, because the types of  
 33 potentially hazardous materials used during routine operation and maintenance activities would be  
 34 used in relatively small quantities and would be localized if they were inadvertently released, and  
 35 because BMPs, as would be implemented in SWPPPs, SPCCPs, and HMMPs, (as detailed in Appendix  
 36 3B, *Environmental Commitments, AMMs, and CMs* and described under Impact HAZ-1 for Alternative  
 37 1A), would be in place to help prevent the inadvertent release of these materials and to contain and  
 38 remediate spills, there would be minimal risk to school children and staff within 0.25 mile within the  
 39 construction footprint.

40 The locations of airports with respect to Alternative 9 are provided in Figure 24-9. The Walnut  
 41 Grove and Spezia Airports are within 2 miles of the Alternative 9 construction footprint (Figure 24-9  
 42 and Table 24-6). With the exception of power transmission lines supplying power to pumps and  
 43 other equipment used for conveyance facilities operation and maintenance, water conveyance  
 44 facilities operations and maintenance are not anticipated to require high-profile equipment (i.e.,  
 45 equipment with a vertical reach of 200 feet or more), the use of which near an airport could result in  
 46 an adverse effect on aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77)

1 and coordinate with Caltrans' Division of Aeronautics prior to initiating maintenance activities  
 2 requiring high-profile equipment to avoid adverse effects on air safety. Compliance with these  
 3 recommendations, which could include limitations necessary to minimize potential problems, such  
 4 as the use of temporary construction equipment, supplemental notice requirements, and marking  
 5 and lighting high-profile structures would reduce the potential for impacts on air safety.

6 Therefore, with implementation of BMPs as part of environmental commitments (i.e., SWPPPs,  
 7 HMMPs, SPCCPs, and SAPs), as well as adherence to all applicable FAA regulations (14 CFR Part 77)  
 8 and coordination/compliance with Caltrans' Division of Aeronautics when performing work with  
 9 high-profile equipment within 2 miles of an airport, operation and maintenance of the water  
 10 conveyance facilities would not create a substantial hazard to the public or the environment and,  
 11 accordingly, there would be no adverse effect.

12 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
 13 operation and maintenance of the water conveyance facilities and the potential interference with air  
 14 safety through the use of high-profile equipment for maintenance of proposed transmission lines  
 15 could have impacts on the public and environment. However, implementation of the BMPs and other  
 16 activities required by SWPPPs, HMMPs, SPCCPs, and SAPs as well as adherence to all applicable FAA  
 17 regulations (14 CFR Part 77) and coordination/compliance with Caltrans' Division of Aeronautics  
 18 when performing work with high-profile equipment within 2 miles of an airport, which would  
 19 include implementation of recommendations to provide supplemental notice and/or equip high-  
 20 profile structures with marking and lighting, would ensure that operation and maintenance of the  
 21 water conveyance facilities would not create a substantial hazard to the public, environment or air  
 22 traffic safety. Therefore, this impact would be less than significant.

23 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 24 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 25 **CM13, CM14, CM16, CM18, and CM19**

26 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 27 the implementation of CM2–CM11, CM13, CM14, CM16, CM18 and CM19 to create hazards to  
 28 workers, the public, and the environment would be similar to those described under Alternative 1A.  
 29 Hazardous materials associated with the operation of construction equipment could be released into  
 30 the environment in the course of the materials' routine transport, use, or disposal. Releases could  
 31 also occur as a result of accidental circumstances. Similarly, construction activities could encounter  
 32 known or unknown hazardous materials sites located on or in the vicinity of construction sites,  
 33 creating the potential for their disturbance and release. Other activities, including the intentional  
 34 demolition of existing structures (e.g., buildings) and reuse of spoil, dredged material and/or RTM,  
 35 would also present the potential to generate hazards or release hazardous materials. However, prior  
 36 to the reuse of spoils, dredged material or RTM, these materials would undergo chemical  
 37 characterization, as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, to  
 38 ensure that they are not creating a hazard to the public and environment.

39 Further, other potential hazards that could result from implementing conservation measures  
 40 include the possible release of hazardous substances in proximity to sensitive receptors; damage or  
 41 disruption of existing infrastructure such that hazardous conditions were created; the accidental  
 42 release of hazardous substances during operation and maintenance (e.g., herbicides for nonnative  
 43 vegetation control); the release, in the short-term, of pesticides from former agricultural lands as a  
 44 result of wetland and floodplain restoration; the potential for safety hazards related to construction

1 in the vicinity of an airport; and the potential for wildfire hazards in the vicinity of construction  
2 sites.

3 These potential effects, were they to occur, would be considered adverse. However, the proposed  
4 conservation measures would be designed to avoid sensitive receptors and would minimize, to the  
5 extent feasible, the need to acquire or traverse areas where the presence of hazardous materials is  
6 suspected or has been verified. Additionally, with implementation of Mitigation Measures HAZ-1a,  
7 HAZ-1b, UT-6a, UT-6c, TRANS-1a, and environmental commitments (discussed previously for  
8 Impacts HAZ-1 through HAZ-6, and in detail in Appendix 3B, *Environmental Commitments, AMMs,*  
9 *and CMs*), the potential for substantial hazards to the public or environment would be reduced and,  
10 accordingly, there would be no adverse effect.

11 Potential safety hazards to air traffic related to the potential for increased bird-aircraft strikes as a  
12 result of creating or enhancing wildlife habitat are discussed under Impact HAZ-8.

13 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
14 public to hazardous substances or conditions during construction, operation, and maintenance of  
15 CM2–CM11, CM13, CM14, CM16, CM18 and CM19 could be significant. Conservation component  
16 implementation would involve extensive use of heavy equipment during construction, and/or the  
17 use and/or transport of hazardous chemicals during operations and maintenance (e.g., herbicides  
18 for nonnative vegetation control). These chemicals could be inadvertently released, exposing  
19 construction workers or the public to hazards. Construction of restoration projects on or near  
20 existing agricultural and industrial land may result in a conflict or exposure to known hazardous  
21 materials, and the use of high-profile equipment in close proximity to airport runways could result  
22 in hazards to air traffic. These potential effects, were they to occur, would be considered a significant  
23 impact. However, in addition to implementation of SWPPPs, SPCCPs, SAPs, HMMPs, and fire safety,  
24 prevention and control measures as part of a FPCP, Mitigation Measures HAZ-1a, HAZ-1b, UT-6a,  
25 UT-6c, and TRANS-1a would be implemented, all of which would ensure that these potential impacts  
26 would be less than significant.

27 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
28 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
29 **Construction Footprint, and Remediate and/or Contain Contamination**

30 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
31 1A.

32 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
33 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
34 **Dispose of Them in Accordance with Applicable Regulations**

35 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
36 1A.

37 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

38 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
39 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 2           **Minimizes Any Effect on Worker and Public Health and Safety**

3           Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 4           Chapter 20, *Public Services and Utilities*.

5           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 6           **Plan**

7           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 8           1A in Chapter 19, *Transportation*.

9           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 10          **Conservation Measures that Create or Improve Wildlife Habitat**

11          **NEPA Effects:** The potential for implementation of conservation measures that create or improve  
 12          wildlife habitat (CM2–CM11) to create hazards air and public safety through increased bird-aircraft  
 13          strikes would be similar to the potential effects described under Alternative 1A. Potential variation  
 14          from Alternative 1A would be anticipated to be minor but could result from the selection of different  
 15          areas for restoration activities based on the location of the physical water conveyance features  
 16          associated with each alternative. Such variation may result greater or less opportunity for bird-  
 17          aircraft strikes depending on the location’s proximity to airport flight zones. The following airports,  
 18          because they are in relatively close proximity (within 2 miles) to the ROAs and/or conservation  
 19          zones could potentially be affected: Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm  
 20          Airport; Sacramento International Airport, and Byron Airport.

21          The effect of increased bird-aircraft strikes during implementation of CM2–CM11 would be adverse  
 22          because it could potentially result in an air and public safety hazard. Mitigation Measure HAZ-8  
 23          would reduce the severity of this effect through the development and implementation of measures  
 24          to reduce, minimize and/or avoid wildlife hazards on air safety. However, this effect is would remain  
 25          adverse.

26          **CEQA Conclusion:** Implementation of CM2–CM11, because they would create or improve wildlife  
 27          habitat, could potentially attract waterfowl and other birds to areas in proximity to existing airport  
 28          flight zones, and thereby result in an increase in bird-aircraft strikes, which could result in  
 29          significant impacts on public safety. The following airports, because they are in relatively close  
 30          proximity (within 2 miles) to the ROAs and/or conservation zones could potentially be affected:  
 31          Travis Air Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International  
 32          Airport, and Byron Airport. Mitigation Measure HAZ-8 could reduce the severity of this impact  
 33          through the ultimate development and implementation of measures to reduce, minimize and/or  
 34          avoid wildlife hazards on air safety, but not to a less-than-significant level. As such, the impact is  
 35          significant and unavoidable.

36          **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 37          **Regulatory Agencies**

38          Please refer to Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative  
 39          1A. This mitigation measure will ensure that the potential for increased bird – aircraft strikes as  
 40          a result of implementing CM2–CM11 in the vicinity of airports are minimized to the greatest  
 41          extent possible.

## 24.3.4 Effects and Mitigation Approaches—Alternatives 4A, 2D, and 5A

### 24.3.4.1 No Action Alternative Early Long-Term

The effects of the No Action Alternative as considered for the purposes of Alternatives 4A, 2D, and 5A (ELT) would be expected to be similar to those effects described for the No Action Alternative Late Long-Term (LLT) in Section 24.3.3.1, *No Action Alternative*.

Projects that are planned or currently under way that involve construction, operation and maintenance activities may result in potential hazards to the environment or public including the potential for encountering contaminated soils and groundwater, release of hazardous materials (including flammable gases) from disturbance of regional fuel pipelines, accidental releases of hazardous materials (e.g., fuels, solvents, and lubricants) and improper disposal of hazardous materials and release of oils, solvents, and fuels from maintaining and cleaning equipment or vehicles. However, due to the shorter time frame, the magnitude of hazards and hazardous materials effects associated with development and habitat restoration activities within the Plan Area would be less than that considered in 2060. Similarly, hazards and hazardous materials effects associated with climate change (levee failure and flooding risks) would be anticipated to be less than under the No Action Alternative (LLT). Generally, impacts would be avoided through adherence to applicable federal, state, and local regulations; project-specific design; and implementation of best management practices (BMPs), environmental commitments, and/or mitigation, including HMMPs, SWPPPs, and SPCCPs. These practices/measurements are intended to avoid, prevent, or minimize hazardous spills and construction-related hazards and/or mitigate for such occurrences. Each project implemented under the No Action Alternative would require its own separate environmental compliance process. Therefore, there would be no adverse effect related to hazards or hazardous materials with regards to implementation of the No Action Alternative (ELT).

**CEQA Conclusion:** Implementation of programs, policies, and projects under the No Action Alternative (ELT) in the study area would have the potential for significant impacts on the public or the environment related to hazards and/or hazardous materials (e.g., through the inadvertent release of fuels or lubricants during construction). However, these impacts would be smaller in scale and more confined in geographic scope relative to the No Action Alternative (LLT). Projects implemented under the No Action Alternative (ELT) would require their own separate environmental compliance processes; would be required to adhere to applicable federal, state, and local regulations; and would incorporate applicable BMPs, environmental commitments, and/or mitigation intended to avoid, prevent, or minimize hazardous spills and construction-related hazards and/or mitigate for such occurrences, which would help ensure that these types of impacts are mitigated to a less-than-significant level for each individual project. Accordingly, this impact would be less than significant.

#### 24.3.4.2 Alternative 4A—Dual Conveyance with Modified Pipeline/Tunnel and Intakes 2, 3, and 5 (9,000 cfs; Operational Scenario H)

##### Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the Release of Hazardous Materials or by Other Means during Construction of the Water Conveyance Facilities

**NEPA Effects:** The potential under Alternative 4A to create substantial hazards through release of hazardous materials during construction of conveyance facilities would be identical to that described under Alternative 4 and would constitute an adverse effect on the physical environment. Potential effects include routine use of hazardous materials, possible natural gas accumulation in tunnels, contact with or release of existing contaminants, constituents in RTM, effects of electrical transmission lines, conflicts with utilities containing hazardous materials, and routine transport of hazardous materials. Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be available to reduce the severity of these effects. Accordingly, this would not be an adverse effect.

**CEQA Conclusion:** During construction of the water conveyance facilities, the potential for direct impacts on construction personnel, the public and/or the environment associated with a variety of hazardous physical or chemical conditions under Alternative 4A would be identical to those described for Alternative 4. Such conditions may arise as a result of the intensity and duration of construction activities at the north Delta intakes, forebays, and conveyance pipelines and tunnels, and the hazardous materials that would be needed in these areas during construction. Potential hazards include the routine use of hazardous materials (as defined by Title 22 CCR Division 4.5); natural gas accumulation in water conveyance tunnels; the inadvertent release of existing contaminants in soil, sediment, and groundwater, or release of hazardous materials from existing infrastructure; disturbance of electrical transmission lines; and hazardous constituents present in RTM. Many of these physical and chemical hazardous conditions would occur in close proximity to the towns of Hood and Courtland during construction of the north Delta intakes. Additionally, the potential would exist for the construction of the water conveyance facilities to indirectly result in the release of hazardous materials through the disruption of existing road, rail, or river hazardous materials transport routes because construction would occur in the vicinity of three hazardous material transport routes, three railroad corridors, and waterways with barge traffic. These impacts are considered significant because the potential exists for substantial hazard to the public or environment to occur related to conveyance facility construction. However, implementation of Mitigation Measures HAZ-1a and HAZ-1b, UT-6a, and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), along with environmental commitments to prepare and implement SWPPPs, HMMPs, SPCCPs, SAPs, and a Barge Operations Plan (described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*) would reduce these impacts to a less-than-significant level by identifying and describing potential sources of hazardous materials so that releases can be avoided and materials can be properly handled; detailing practices to monitor pollutants and control erosion so that appropriate measures are taken; implementing onsite features to minimize the potential for hazardous materials to be released to the environment; minimizing risk associated with the relocation of utility infrastructure; and coordinating the transport of hazardous materials to reduce the risk of spills.

1       **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2       **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3       **Construction Footprint, and Remediate and/or Contain Contamination**

4       Please see Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative 4.

5       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 6       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 7       **Dispose of Them in Accordance with Applicable Regulations**

8       Please see Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative 4.

9       **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

10       Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 11       Chapter 20, *Public Services and Utilities*.

12       **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 13       **Minimizes Any Effect on Worker and Public Health and Safety**

14       Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 15       Chapter 20, *Public Services and Utilities*.

16       **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 17       **Plan**

18       Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 19       1A in Chapter 19, *Transportation*.

20       **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 21       **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 22       **Facilities**

23       **NEPA Effects:** The potential under Alternative 4A to expose sensitive receptors, such as parks,  
 24       schools, and hospitals within 0.25 mile to hazardous materials, hazardous substances or waste  
 25       during construction would be identical to those impacts described under Alternative 4 and would  
 26       not have an effect on sensitive receptors because no schools, parks or hospitals are located within  
 27       0.25 mile of the construction footprint of the water conveyance facility.

28       **CEQA Conclusion:** The potential for exposure of sensitive receptors to hazardous substances or  
 29       conditions under Alternative 4A would be identical to the impacts described for Alternative 4. There  
 30       are no schools, parks or hospitals located within 0.25 mile of the water conveyance facilities  
 31       alignment. Therefore, no sensitive receptors would be exposed to hazardous materials, substances,  
 32       or waste as a result of construction of the water conveyance facilities under Alternative 4A. As such,  
 33       there would be no impact. Potential air quality effects on sensitive receptors are discussed in  
 34       Chapter 22, *Air Quality and Greenhouse Gases*.

1 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 2 **Create a Significant Hazard to the Public or the Environment**

3 **NEPA Effects:** The potential for conflicts with, or exposure to known hazardous material sites during  
 4 conveyance facility construction under Alternative 4A would be identical to those identified for  
 5 Alternative 4 and would not have an effect on the public or the environment because no sites are  
 6 located within the construction footprint of the water conveyance facilities.

7 **CEQA Conclusion:** The potential for conflicts with or exposure to known hazardous material sites  
 8 during conveyance facility construction under Alternative 4A would be identical to those identified  
 9 for Alternative 4. Because there are no “Cortese List” sites or known SOCs within the construction  
 10 footprint of the water conveyance facility for Alternative 4 there would be no conflict with known  
 11 hazardous materials sites during construction of the water conveyance facilities, and therefore, no  
 12 related hazard to the public or the environment. Accordingly, there would be no impact. No  
 13 mitigation is required. The potential for encountering unknown hazardous materials sites during  
 14 the course of construction is discussed under Impact HAZ-1.

15 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 16 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 17 **Study Area during Construction of the Water Conveyance Facilities**

18 **NEPA Effects:** The potential for construction of conveyance facilities under Alternative 4A to result  
 19 in a safety hazard associated with activities within 2 miles of an airport or private airstrip is  
 20 identical to effects described for Alternative 4. This potential effect is not considered adverse  
 21 because, as part of an environmental commitment pursuant to the State Aeronautics Act, DWR  
 22 would coordinate with Caltrans’ Division of Aeronautics to eliminate any potential conflicts prior to  
 23 initiating construction and comply with its recommendations based on its investigations and  
 24 compliance with the recommendations of the OE/AAA (for Byron and Franklin Field Airports).

25 **CEQA Conclusion:** The potential for construction of conveyance facilities under Alternative 4A to  
 26 result in a safety hazard associated with activities within 2 miles of an airport or private airstrip is  
 27 identical to impacts described for Alternative 4. The use of helicopters for stringing the proposed  
 28 230-kV transmission lines and relocating the existing 230-kV and 500-kV transmission lines, and of  
 29 high-profile construction equipment (200 feet or taller), such as cranes, for installation of pipelines,  
 30 and potentially pile drivers, such as would be used during the construction of the intakes, have the  
 31 potential to result in safety hazards to aircraft during takeoff and landing if the equipment is  
 32 operated too close to runways. Three private airports (Borges-Clarksburg Airport, Spezia Airport,  
 33 and Flying B Ranch Airport) and two public airports (Byron Airport and Franklin Field Airport) are  
 34 located within 2 miles of the construction footprint of several features of the water conveyance  
 35 facilities for Alternative 4, including temporary and permanent transmission lines. Relocation of the  
 36 existing 230-kV and 500-kV transmission lines is not expected to result in an air safety hazard  
 37 because the nearest airport to the new location is greater than 3 miles away.

38 As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, as part of an  
 39 environmental commitment pursuant to the State Aeronautics Act, DWR would coordinate with  
 40 Caltrans’ Division of Aeronautics prior to initiating construction and comply with its  
 41 recommendations based on its investigations and compliance with the recommendations of the  
 42 OE/AAA (for Byron and Franklin Field Airports). These recommendations, which could include  
 43 limitations necessary to minimize potential problems such as the use of temporary construction  
 44 equipment, supplemental notice requirements, and marking and lighting high-profile structures,

1 would reduce potential impacts on air safety. This impact would be less than significant because  
 2 recommendations to avoid conflicts with existing airports located near construction areas would be  
 3 implemented by DWR prior to construction as required by Caltrans. No mitigation is required.

4 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 5 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 6 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 7 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

8 **NEPA Effects:** The potential for construction of conveyance facilities under Alternative 4A to result  
 9 in exposure of people or structures to risks associated with wildfire would be identical to the  
 10 impacts described for Alternative 4. This potential effect is not adverse because no portion of  
 11 Alternative 4A is located in or near an area designated as a High or Very High Fire Hazard Severity  
 12 Zone and measures to prevent and control wildland fires would be implemented by DWR during  
 13 construction, operation, and maintenance of the water conveyance facilities in full compliance with  
 14 Cal-OSHA standards for fire safety and prevention.

15 **CEQA Conclusion:** The potential for construction of conveyance facilities under Alternative 4A to  
 16 result in exposure of people or structures to risks associated with wildfire would be identical to the  
 17 impacts described for Alternative 4. People or structures would not be subject to a significant risk of  
 18 loss, injury, or death involving wildland fires during construction or operation and maintenance of  
 19 the water conveyance facilities because the alternative would comply with Cal-OSHA fire prevention  
 20 and safety standards; DWR would implement standard fire safety and prevention measures as part  
 21 of an FPCP (described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because  
 22 the water conveyance facilities would not be located in a High or Very High Fire Hazard Severity  
 23 Zone. This impact would be less than significant because conditions do not exist near construction  
 24 areas that would result in exposure of people or structures to significant risk of exposure to wildfire  
 25 and DWR would implement standard fire safety and prevention measures. No mitigation is required.

26 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 27 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 28 **Water Conveyance Facilities**

29 **NEPA Effects:** The potential for operation and maintenance of the water conveyance facilities  
 30 (excluding water supply operations) under Alternative 4A to result in a substantial hazard to the  
 31 public or environment would be the same as described for Alternative 4. During routine operation  
 32 and maintenance of the water conveyance facilities the potential would exist for the accidental  
 33 release of hazardous materials and other potentially hazardous releases (e.g., contaminated solids  
 34 and sediment), and for interference with air safety should high-profile equipment be required for  
 35 maintenance of the proposed transmission lines near an airport. Accidental hazardous materials  
 36 releases, such as chemicals directly associated with routine maintenance (e.g., fuels, solvents, paints,  
 37 oils), are likely to be small, localized, temporary and periodic; therefore, they are unlikely to result in  
 38 adverse effects on workers, the public, or the environment. Further, BMPs and measures  
 39 implemented as part of SWPPPs, SPCCPs, SAPs and HMMPs would be developed and implemented as  
 40 part of the project, as described under Impact HAZ-1, and in detail in Appendix 3B, *Environmental*  
 41 *Commitments, AMMs, and CMs*, which would reduce the potential for accidental spills to occur and  
 42 would result in containment and remediation of spills should they occur. Approximately 10,800  
 43 cubic yards of dry sediment/solids would be produced annually as a result of maintenance of  
 44 sedimentation basins and solids lagoons with three intakes operating. Potentially contaminated

1 solids could pose a hazard to the environment if improper disposal occurred. This effect would be  
 2 considered adverse because of the large volume of sediment/solids that would be handled and the  
 3 potential for improper disposal. However, Mitigation Measure HAZ-6 would be available to reduce  
 4 these effects. Under Mitigation Measure HAZ-6 solids from the solids lagoons would be sampled and  
 5 characterized to evaluate disposal options, and disposed of accordingly at an appropriate, licensed  
 6 facility. Accordingly, this would not be an adverse effect.

7 **CEQA Conclusion:** The potential for operation and maintenance of conveyance facilities under  
 8 Alternative 4A to result in a substantial hazard to the public or environment would be identical to  
 9 the effects described for Alternative 4. The accidental release of hazardous materials (including  
 10 contaminated solids and sediment) to the environment during operation and maintenance of the  
 11 water conveyance facilities and the potential interference with air safety through the use of high-  
 12 profile equipment for maintenance of proposed transmission lines could result in significant impacts  
 13 on the public and environment because of the large scale of construction and the potential for  
 14 accidental release of hazardous materials during construction. However, implementation of the  
 15 BMPs and other activities required by SWPPPs, HMMPs, SAPs, SPCCPs, as well as adherence to all  
 16 applicable FAA regulations (14 CFR Part 77) and, as part of an environmental commitment pursuant  
 17 to the State Aeronautics Act, coordination/compliance with Caltrans' Division of Aeronautics when  
 18 performing work with high-profile equipment within 2 miles of an airport would ensure that  
 19 impacts are reduced to a less-than-significant level. Contaminated solids could pose a hazard to the  
 20 environment if improperly disposed of, and would be considered a significant impact because of the  
 21 large volume of sediment/solids that would be handled and the potential for improper disposal.  
 22 However, implementation of Mitigation Measure HAZ-6 would reduce this impact to a less-than-  
 23 significant level by requiring sampling and characterizing solids from the solids lagoons to evaluate  
 24 options to dispose of material at an appropriate, licensed facility.

25 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 26 **and/or Disposal**

27 Please see Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative 4.

28 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 29 **Release of Hazardous Materials or by Other Means as a Result of Implementing**  
 30 **Environmental Commitments 3, 4, 6–11, and 16**

31 **NEPA Effects:** Effects of Alternative 4A related to the potential for release of hazardous materials  
 32 from implementing these Environmental Commitments would be similar to those described for  
 33 Alternative 4. However, as described in Chapter 3, *Description of Alternatives*, under Alternative 4A,  
 34 the project would restore up to 15,836 acres of habitat under Environmental Commitments 3, 4, 6–  
 35 11 as compared with 83,800 acres under Alternative 4. Environmental Commitment 16 under  
 36 Alternative 4A would consist of installing and operating a nonphysical fish barrier at Georgiana  
 37 Slough only, and would not include the installation of these barriers at head of Old River, the Delta  
 38 Cross Channel, Turner Cut, or Columbia Cut. CM2, CM5, CM13, CM14, and CM17–CM21 would not be  
 39 implemented as part of this alternative. Therefore, the magnitude of effects under Alternative 4A  
 40 would be smaller than that associated with Alternative 4.

41 Implementation of portions of Environmental Commitments 3, 4, 6–11, and 16 could result in  
 42 multiple potentially hazardous effects related to the release of or exposure to hazardous materials  
 43 or other hazards including increased production, mobilization, and bioavailability of

1 methylmercury; release of existing contaminants (e.g., pesticides in agricultural land); air safety  
 2 hazards; and wildfires. These effects are considered adverse because of the potential for substantial  
 3 hazards to occur while constructing restoration actions. However, implementation of Mitigation  
 4 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a and the environmental commitments  
 5 including implementation of SWPPPS, HMMPs, SPCCPs, SAPs, and fire prevention and fire control  
 6 BMPs as part of an FPCP (described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*)  
 7 are available to reduce/minimize these potential effects such that there would be no adverse effect.

8 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
 9 public to hazardous substances or conditions during construction, operation, and maintenance of  
 10 Environmental Commitments 3, 4, and 6–11, and 16, is considered significant because  
 11 implementation of these Environmental Commitments would involve extensive use of heavy  
 12 equipment during construction and transporting hazardous chemicals during operations and  
 13 maintenance (e.g., herbicides for nonnative vegetation control). These chemicals could be  
 14 inadvertently released, exposing construction workers or the public to hazards. Construction of  
 15 restoration projects on or near existing agricultural and industrial land and/or SOCs may also result  
 16 in a conflict with or exposure to known hazardous materials, and the use of high-profile equipment  
 17 (i.e., 200 feet or higher) in close proximity to airport runways could result in safety hazards to air  
 18 traffic. However in addition to implementation of SWPPPS, HMMPs, SPCCPs, SAPs, and fire  
 19 prevention and fire control BMPs as part of an FPCP (described in Appendix 3B, *Environmental*  
 20 *Commitments, AMMs, and CMs*), Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a  
 21 would be implemented to ensure no substantial hazards to the public or the environment would  
 22 occur from implementation of these Environmental Commitments and that impacts would be  
 23 reduced to a less-than-significant level.

24 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 25 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 26 **Construction Footprint, and Remediate and/or Contain Contamination**

27 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 28 4. Implementation of this mitigation measure will result in the avoidance, successful  
 29 remediation or containment of all known or suspected contaminated areas, as applicable, within  
 30 the construction footprint, which would prevent the release of hazardous materials from these  
 31 areas into the environment.

32 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 33 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 34 **Dispose of Them in Accordance with Applicable Regulations**

35 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 36 4. Implementation of this measure will ensure that hazardous materials present in or associated  
 37 with structures being demolished will not be released into the environment.

38 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

39 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 4 in  
 40 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 2           **Minimizes Any Effect on Worker and Public Health and Safety**

3           Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 4 in  
 4           Chapter 20, *Public Services and Utilities*.

5           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 6           **Plan**

7           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 8           4 in Chapter 19, *Transportation*.

9           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 10          **Environmental Commitments that Create or Improve Wildlife Habitat**

11          **NEPA Effects:** Effects of Alternative 4A related to the potential for increased risk of aircraft bird  
 12          strikes from implementing restoration actions that improve wildlife habitat would be similar to  
 13          those described for Alternative 4. However, as described in Chapter 3, *Description of Alternatives*,  
 14          Alternative 4A would restore up to 15,836 acres of habitat under Environmental Commitments 3, 4,  
 15          and 6–11 as compared with 83,800 acres under CM3–CM11 under Alternative 4. Therefore, the  
 16          magnitude of effects under Alternative 4A would be smaller than that associated with Alternative 4.

17          Implementation of Environmental Commitments 3, 4, and 6–11 under Alternative 4A could result in  
 18          an increase of aircraft bird strikes in the vicinity of restoration areas that attract waterfowl and  
 19          other birds in proximity to local airports. This effect is considered adverse because of the potential  
 20          to affect aircraft safety in the vicinity of restoration projects. Mitigation Measure HAZ-8 is available  
 21          to reduce the severity of this impact such that there would be no adverse effect.

22          **CEQA Conclusion:** Implementation of Environmental Commitments 3, 4, and 6–11, because they  
 23          would create or improve wildlife habitat, could potentially attract waterfowl and other birds to  
 24          areas in proximity to existing airport flight zones, and thereby potentially result in an increase in  
 25          bird-aircraft strikes. The potential for this impact is considered significant because of the increased  
 26          wildlife restoration projects that could occur in the vicinity of Travis Air Force Base; Rio Vista  
 27          Municipal Airport; Funny Farm Airport; Sacramento International Airport; and Byron Airport.  
 28          Mitigation Measure HAZ-8 could reduce the severity of this impact by minimizing bird strike  
 29          hazards, but this impact would not be reduced to a less-than-significant level because of the  
 30          inherent uncertainty related to bird strike risks for these future projects. Therefore this impact is  
 31          significant and unavoidable.

32          **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 33          **Regulatory Agencies**

34          Please see Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative 4.

1 **24.3.4.3 Alternative 2D—Dual Conveyance with Modified**  
 2 **Pipeline/Tunnel and Intakes 1, 2, 3, 4, and 5 (15,000 cfs;**  
 3 **Operational Scenario B)**

4 **Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the**  
 5 **Release of Hazardous Materials or by Other Means during Construction of the Water**  
 6 **Conveyance Facilities**

7 *NEPA Effects:* Alternative 2D would include the same physical/structural components as Alternative  
 8 4 but would include two additional intakes (Intakes 1 and 4). The nature of the impacts related to  
 9 hazards and hazardous materials under Alternative 2D would be similar to those impacts described  
 10 under Alternative 4 in Section 24.3.3.9. However, the potential under Alternative 2D to create  
 11 substantial hazards through release of hazardous materials during construction of conveyance  
 12 facilities would be somewhat greater than under Alternative 4 because the geographic extent,  
 13 magnitude and duration of construction under Alternative 2D would be greater due to two  
 14 additional intakes. Potential effects include routine use of hazardous materials, possible natural gas  
 15 accumulation in tunnels, contact with or release of existing contaminants, constituents in RTM,  
 16 effects of electrical transmission lines, conflicts with utilities containing hazardous materials and  
 17 routine transport of hazardous materials. Many of these physical and chemical hazardous conditions  
 18 would occur in close proximity to the towns of Hood and Courtland during construction of the north  
 19 Delta intakes.

20 Infrastructure and structures in the study area containing hazardous materials cross the Alternative  
 21 2D conveyance alignment and construction footprint (Figures 24-3, 24-5, and 24-6). Table 24-3  
 22 provides the number and types of regional electrical transmission and pipelines crossing this water  
 23 conveyance facilities alignment. There are 12 overhead power/electrical transmission lines, 6  
 24 natural gas pipelines, 3 petroleum product lines, and 12 known inactive gas wells and no known  
 25 active oil or natural gas wells (Figure 24-5) within the proposed Alternative 2D water conveyance  
 26 facilities construction footprint. The precise location of pipelines within a tunnel section would be  
 27 identified prior to construction to avoid conflicts with shaft construction and disposal of RTM.  
 28 Studies would be done prior to construction to identify the minimum allowable distance between  
 29 existing gas wells and tunnel excavation. Abandoned wells would be tested to confirm that they have  
 30 been abandoned according to DOGGR well abandonment requirements. Those wells not abandoned  
 31 according to these requirements would be improved. In addition, to avoid the potential conflicts  
 32 with shaft construction and disposal areas, the utility and infrastructure relocation would be  
 33 coordinated with local agencies and owners.

34 Tunnel construction activities would carry the potential to encounter gases that could enter the  
 35 tunnels and accumulate to flammable or explosive concentrations. The construction contractor  
 36 would be required to prepare an emergency plan prior to construction of the tunnels (Title 8,  
 37 Division 1, Chapter 4, Subchapter 20, Article 9, “Emergency Plan and Precautions”). This plan would  
 38 outline the duties and responsibilities of all employees in the event of a fire, explosion or other  
 39 emergency. The plan would include maps, evacuation plans, rescue procedures, communication  
 40 protocol, and check-in/check-out procedures. Copies of the plan would be given to the local fire or  
 41 designated off-site rescue teams and the Division.

42 Hazardous constituents associated with RTM, generated during tunnel construction are not  
 43 anticipated; however, the possibility exists for RTM and decanted water to pose a hazard to the  
 44 construction workers, the public, or the environment. It is anticipated that all tunnel boring

1 additives would be non-toxic and biodegradable. Regardless, before the RTM could be re-used or  
2 returned to the environment, it would be managed to comply with NPDES permit requirements, and  
3 at a minimum would go through a drying/water-solids separation process and a possible physical or  
4 chemical treatment following chemical characterization (including RTM decant liquid).

5 As described for Alternative 4, permanent structures would be removed or relocated within the  
6 water conveyance facility footprint. Because Alternative 2D includes five intakes, it is anticipated  
7 that more structures would be impacted than under Alternative 4. These structures would include  
8 residential buildings, storage or agricultural support facilities, recreational facilities (e.g., pools and  
9 docks), and other types of structures (e.g., power/utility structures and other types of  
10 infrastructure). As described under Alternative 4, these structures may contain hazardous materials  
11 that would require proper handling and disposal, if demolition is necessary. As described for Impact  
12 HAZ-1 under Alternative 4, Mitigation Measure HAZ-1b would be implemented by DWR to ensure  
13 that there are no adverse effects related to structure demolition due to hazardous materials.

14 In general, the transportation of hazardous materials via trucks, trains and ships poses potential  
15 risks associated with the accidental release of these materials to the environment. Rerouting  
16 vehicular traffic carrying hazardous materials during construction of the water conveyance facilities  
17 could increase the risk of accidental release due to inferior road quality or lack of driver familiarity  
18 with the modified routes. Hazardous materials transportation routes are presented in Figure 24-2  
19 and in Table 24-4. Routes anticipated to be affected during construction of the water conveyance  
20 facilities are described in Chapter 19, *Transportation*. It is not anticipated that traffic on any of these  
21 highways would need to be rerouted. Under Mitigation Measure TRANS-1a, a site-specific  
22 construction traffic management plan, taking into account hazardous materials transportation,  
23 would be prepared and implemented prior to initiation of construction of water conveyance  
24 facilities (as described under Impact HAZ-1 for Alternative 4), and would be expected to reduce  
25 potential circulation effects and avoiding rerouting of traffic as practicable. The plan would reduce  
26 the potential for effects on hazardous materials transportation routes in the study area. Barges  
27 supporting water conveyance facilities construction may also transport hazardous materials such as  
28 fuels and lubricants or other chemicals. The potential exists for accidental release of hazardous  
29 materials from project-related barges. To avoid effects on the environment related to this issue,  
30 BMPs would be implemented as part of a Barge Operations Plan (as discussed under Impact HAZ-1  
31 for Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and CMs*) that would  
32 reduce the potential for accidental releases of hazardous materials during transport and transfer.  
33 Finally, under this alternative, the water conveyance would cross under the existing BNSF/Amtrak  
34 San Joaquin line between Bacon Island and Woodward Island; however, the effect of this crossing  
35 would likely be minimal because the proposed conveyance would traverse the railroad in a deep  
36 bore tunnel (see Chapter 19, *Transportation*, for discussion). Further, the UPRR runs proximate to  
37 the construction area of the proposed Byron Forebay; however, construction is unlikely to disrupt  
38 rail service because much of this line has not been in service recently. Any potential effects on rail  
39 traffic during construction would be reduced with implementation of Mitigation Measure TRANS-1a,  
40 which would include stipulations to coordinate with rail providers to develop alternative interim  
41 transportation modes (e.g., trucks or buses) that could be used to provide freight and/or passenger  
42 service during any longer term railroad closures and daily construction time windows during which  
43 construction would be restricted or rail operations would need to be suspended for any activity  
44 within railroad rights of way. This would minimize the potential risk of release of hazardous  
45 materials being transported via these rails.

1 Project design would minimize, to the extent feasible, the need to acquire or traverse areas where  
2 the presence of hazardous materials is suspected or has been verified. Further, environmental  
3 commitments would be implemented, including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge  
4 Operations Plan; and chemical characterization of RTM prior to reuse (e.g., RTM in levee  
5 reinforcement) or discharge. Together, these commitments would reduce these potential hazards  
6 associated with water conveyance facilities construction. Additionally, the implementation of  
7 Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services*  
8 *and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*) would further reduce the  
9 potential severity of any adverse effects. As such, construction of the water conveyance facilities  
10 would not create a substantial hazard to the public or the environment through the routine  
11 transport, use, or disposal of hazardous materials or the upset/accidental release of these materials.  
12 Therefore, this impact would not be adverse.

13 **CEQA Conclusion:** During construction of the water conveyance facilities, the potential for direct  
14 impacts on construction personnel, the public and/or the environment associated with a variety of  
15 hazardous physical or chemical conditions under Alternative 2D would be greater than under  
16 Alternative 4 because there would be two additional intakes (Intakes 1 and 4). The nature of the  
17 impacts, however, would be similar to those described for Alternative 4 in Section 24.3.3.9. Impacts  
18 related to hazards and/or hazardous materials may arise as a result of the intensity and duration of  
19 construction activities at the north Delta intakes, forebays and conveyance pipelines and tunnels,  
20 and the hazardous materials that would be needed in these areas during construction. Potential  
21 hazards include the routine use of hazardous materials (as defined by Title 22 of the California Code  
22 of Regulations, Division 4.5); natural gas accumulation in water conveyance tunnels; the inadvertent  
23 release of existing contaminants in soil, sediment, and groundwater, or release of hazardous  
24 materials from existing infrastructure; disturbance of electrical transmission lines; and hazardous  
25 constituents present in RTM. Many of these physical and chemical hazardous conditions would  
26 occur in close proximity to the towns of Hood and Courtland during construction of the north Delta  
27 intakes. Additionally, the potential would exist for the construction of the water conveyance  
28 facilities to indirectly result in the release of hazardous materials through the disruption of existing  
29 road, rail, or river hazardous materials transport routes because construction would occur in the  
30 vicinity of three hazardous material transport routes, three railroad corridors, and waterways with  
31 barge traffic. These impacts are considered significant because the potential exists for substantial  
32 hazard to the public or environment to occur related to conveyance facility construction. However,  
33 implementation of Mitigation Measures HAZ-1a and HAZ-1b, UT-6a and UT-6c (described in Chapter  
34 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*), along  
35 with environmental commitments to prepare and implement SWPPPs, HMMPs, SPCCPs, SAPs, and a  
36 Barge Operations Plan (described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*)  
37 would reduce these impacts to a less-than-significant level by identifying and describing potential  
38 sources of hazardous materials so that releases can be avoided and materials can be properly  
39 handled; detailing practices to monitor pollutants and control erosion so that appropriate measures  
40 are taken; implementing onsite features to minimize the potential for hazardous materials to be  
41 released to the environment; minimizing risk associated with the relocation of utility infrastructure;  
42 and coordinating the transport of hazardous materials to reduce the risk of spills.

1       **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2       **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3       **Construction Footprint, and Remediate and/or Contain Contamination**

4       Please see Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative 4.

5       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 6       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 7       **Dispose of Them in Accordance with Applicable Regulations**

8       Please see Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative 4.

9       **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

10       Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 4 in  
 11       Chapter 20, *Public Services and Utilities*.

12       **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 13       **Minimizes Any Effect on Worker and Public Health and Safety**

14       Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 4 in  
 15       Chapter 20, *Public Services and Utilities*.

16       **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 17       **Plan**

18       Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 19       4 in Chapter 19, *Transportation*.

20       **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 21       **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 22       **Facilities**

23       **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
 24       an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
 25       pose a health hazard. However, e no schools, parks or hospitals are located within 0.25 mile of the  
 26       construction footprint of Alternative 2D. Therefore, no sensitive receptors would be exposed to  
 27       hazardous materials, substances, or waste as a result of construction of the water conveyance  
 28       facilities under Alternative 2D. As such, there would be no effect. Potential air quality effects on  
 29       sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

30       **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
 31       Alternative 2D water conveyance facilities alignment. Therefore, for this alternative there would be  
 32       no impact due to exposure of sensitive receptors to hazardous materials, substances or waste as a  
 33       result of construction of the water conveyance facilities. No mitigation is required. Potential air  
 34       quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and Greenhouse Gases*.

1 **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 2 **Create a Significant Hazard to the Public or the Environment**

3 **NEPA Effects:** The water conveyance facility under Alternative 2D would include most of the same  
 4 physical/structural components as Alternative 4 but would also include two additional intakes. The  
 5 nature of the impacts related to hazards and hazardous materials under Alternative 2D would be  
 6 similar to those impacts described under Alternative 4 in Section 24.3.3.9. However, the potential  
 7 under Alternative 2D to create conflicts with, or result in exposure to known hazardous material  
 8 sites during conveyance facility construction would be somewhat greater than under Alternative 4  
 9 due to the two additional intakes because the geographic extent, magnitude and duration of  
 10 construction. However, because there are no known SOCs or “Cortese List” sites within the  
 11 construction footprint of the water conveyance facility of Alternative 2D, there would be no conflict  
 12 with known hazardous materials sites during construction of the water conveyance facilities, and  
 13 therefore, no related hazard to the public or the environment. Therefore, there would be no effect.  
 14 The potential for encountering unknown hazardous materials sites during the course of  
 15 construction is discussed under Impact HAZ-1.

16 **CEQA Conclusion:** The potential under Alternative 2D to create the potential for conflicts with, or  
 17 result in exposure to known hazardous material sites during conveyance facility construction would  
 18 be somewhat greater than under Alternative 4 due to the two additional intakes because the  
 19 geographic extent, magnitude and duration of construction. However, because there are no known  
 20 SOCs or “Cortese List” sites within the construction footprint of the water conveyance facility under  
 21 this alternative, there would be no conflict with known hazardous materials sites during  
 22 construction of the water conveyance facilities, and therefore, no related hazard to the public or the  
 23 environment. Accordingly, there would be no impact. No mitigation is required. The potential for  
 24 encountering unknown hazardous materials sites during the course of construction is discussed  
 25 under Impact HAZ-1.

26 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
 27 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
 28 **Study Area during Construction of the Water Conveyance Facilities**

29 **NEPA Effects:** The potential for construction of conveyance facilities under Alternative 2D to result  
 30 in a safety hazard associated with activities within 2 miles of an airport or private airstrip would be  
 31 similar to that described for Alternative 4 in Section 24.3.3.9. However, because there would be two  
 32 additional intakes under Alternative 2D relative to Alternative 4, the geographical extent of  
 33 Alternative 2D is greater. Three private airports (Borges-Clarksburg Airport, Flying B Ranch Airport,  
 34 and Spezia Airport) and two public airports (Byron Airport and Franklin Field Airport) are located  
 35 within 2 miles of the construction footprint for the Alternative 2D water conveyance facilities (Table  
 36 24-6). The Borges-Clarksburg Airport, located 2 miles northeast of the town of Clarksburg, is within  
 37 0.5 mile of a proposed intake work area (Intake 1) and less than 1 mile from the intake. These are  
 38 water conveyance feature construction areas where high-profile construction equipment may be  
 39 used. Spezia Airports, on Tyler Island, is within 2 miles of two ventilation/access shafts, a tunnel  
 40 work area, and a permanent access road. Flying B Ranch Airport, in Elk Grove, is within 2 miles of a  
 41 proposed temporary 230-kV transmission line. Franklin Field Airport, approximately 4 miles  
 42 southeast of Franklin, is less than 1 mile from a proposed temporary 230-kV transmission line.  
 43 Byron Airport, less than 1.5 miles west of Clifton Court Forebay, is within 2 miles of a proposed 12-  
 44 kV temporary transmission line; a proposed 230-kV permanent transmission line; and a borrow  
 45 and/or spoils area. In addition, an existing 230-kV and 500-kV transmission line, both located south

1 of Clifton Court Forebay, would be relocated to an area further south/southeast within 0.5 mile of  
2 their original location. However, because the nearest airport, Byron Airport, is over 3 miles away,  
3 this work is not expected to pose an air safety hazard. With the exception of the proposed  
4 transmission lines, construction of these features or work in these areas would not require the use  
5 of high-profile construction equipment. Because construction of the proposed transmission lines  
6 would potentially require high-profile equipment (e.g., cranes), and because construction of the 230-  
7 kV transmission line would require the use of helicopters during the stringing phase, the safety of  
8 air traffic arriving or departing from either of these airports could be compromised during  
9 construction of the proposed transmission lines.

10 This potential for implementation of Alternative 2D to result in a safety hazard associated with an  
11 airport or private airstrip within 2 miles of the water conveyance facility is not considered adverse  
12 because, as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, as part of an  
13 environmental commitment pursuant to the State Aeronautics Act, DWR would coordinate with  
14 Caltrans' Division of Aeronautics to eliminate any potential conflicts prior to initiating construction  
15 and comply with its recommendations based on its investigations. DWR would adhere to all  
16 applicable FAA regulations prior to and during construction of water conveyance facilities, including  
17 complying with the recommendations of the OE/AAA (14 CFR Part 77) for Byron and Franklin Field  
18 Airports. Accordingly, this would not be an adverse effect.

19 **CEQA Conclusion:** The potential for construction of conveyance facilities under Alternative 2D to  
20 result in a safety hazard associated with activities within 2 miles of an airport or private airstrip is  
21 similar in nature to impacts described for Alternative 4 in Section 24.3.3.9, although there would be  
22 two additional intakes relative to Alternative 4 so the geographical extent of Alternative 2D is  
23 greater. The use of helicopters for stringing the proposed 230-kV transmission lines and relocating  
24 the existing 230-kV and 500-kV transmission lines, and of high-profile construction equipment (200  
25 feet or taller), such as cranes, for installation of pipelines, and potentially pile drivers, such as would  
26 be used during the construction of the intakes, have the potential to result in safety hazards to  
27 aircraft during takeoff and landing if the equipment is operated too close to runways. Three private  
28 airports (Borges-Clarksburg Airport, Flying B Ranch Airport, and Spezia Airport) and two public  
29 airport (Byron Airport and Franklin Field Airport) are located within 2 miles of the water  
30 conveyance facilities for Alternative 2D. The Borges-Clarksburg Airport, located 2 miles northeast of  
31 the town of Clarksburg, is within 0.5 mile of a proposed intake work area (Intake 1) and less than 1  
32 mile from the intake.

33 As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, as part of an  
34 environmental commitment pursuant to the State Aeronautics Act, DWR would coordinate with  
35 Caltrans' Division of Aeronautics prior to initiating construction and comply with its  
36 recommendations based on its investigations. DWR would adhere to all applicable FAA regulations  
37 prior to and during construction of water conveyance facilities, including complying with the  
38 recommendations of the OE/AAA (14 CFR Part 77) for Byron and Franklin Field Airports. These  
39 recommendations, which could include limitations necessary to minimize potential problems such  
40 as the use of temporary construction equipment, supplemental notice requirements, and marking  
41 and lighting high-profile structures, would reduce potential impacts on air safety. This impact would  
42 be less than significant because recommendations to avoid conflicts with existing airports located  
43 near construction areas would be implemented by DWR prior to construction as required by  
44 Caltrans. No mitigation is required.

1 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 2 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 3 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 4 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

5 **NEPA Effects:** The potential for construction of conveyance facilities under Alternative 2D to result  
 6 in exposure of people or structures to risks associated with wildfire would be similar to the impacts  
 7 described for Alternative 4 in Section 24.3.3.9. However, because there would be two additional  
 8 intakes under Alternative 2D relative to Alternative 4, the geographical extent of Alternative 2D is  
 9 greater. Regardless, this potential effect is not adverse because no portion of Alternative 2D is  
 10 located in or near an area designated as a High or Very High Fire Hazard Severity Zone. The  
 11 northernmost and southernmost portions of the water conveyance alignment under this alternative,  
 12 where intake facilities and fuel stations, and the expanded Clifton Court Forebay, respectively, would  
 13 be located, are near Moderate Fire Hazard Severity Zones, Measures to prevent and control wildland  
 14 fires would be implemented by DWR during construction, operation, and maintenance of the water  
 15 conveyance facilities in full compliance with Cal-OSHA standards for fire safety and prevention.  
 16 Accordingly, this would not be an adverse effect.

17 **CEQA Conclusion:** The potential for construction of conveyance facilities under Alternative 2D to  
 18 result in exposure of people or structures to risks associated with wildfire would be similar to the  
 19 impacts described for Alternative 4 in Section 24.3.3.9. However, because there would be two  
 20 additional intakes under Alternative 2D relative to Alternative 4, the geographical extent of  
 21 Alternative 2D is greater. People or structures would not be subject to a significant risk of loss,  
 22 injury or death involving wildland fires during construction or operation and maintenance of the  
 23 water conveyance facilities because the alternative would comply with Cal-OSHA fire prevention  
 24 and safety standards; DWR would implement standard fire safety and prevention measures as part  
 25 of an FPCP (described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*); and because  
 26 the water conveyance facilities would not be located in a High or Very High Fire Hazard Severity  
 27 Zone. This impact would be less than significant because conditions do not exist near construction  
 28 areas that would result in exposure of people or structures to significant risk of exposure to wildfire  
 29 and DWR would implement standard fire safety and prevention measures. No mitigation is required.

30 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 31 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 32 **Water Conveyance Facilities**

33 **NEPA Effects:** Alternative 2D would include the same physical/structural components as Alternative  
 34 4 but would include two additional intakes. The nature of the impacts related to hazards and  
 35 hazardous materials under Alternative 2D would be similar to those impacts described under  
 36 Alternative 4 in Section 24.3.3.9. However, the potential under Alternative 2D to create substantial  
 37 hazards through release of hazardous materials during maintenance and operation of the water  
 38 conveyance facilities would be somewhat greater than under Alternative 4 because the geographic  
 39 extent and magnitude of O&M activities under Alternative 2D would be greater due to two  
 40 additional intakes.

41 The Borges-Clarksburg, Flying B Ranch, and Spezia Airports (all private air facilities), and the Byron  
 42 Airport and Franklin Field Airport (public airports), are within 2 miles of the Alternative 2D  
 43 construction footprint (Table 24-6), as discussed under Impact HAZ-1 for this alternative. With the  
 44 exception of power transmission lines supplying power to pumps, and other equipment used for

1 water conveyance facilities operation and maintenance, water conveyance facilities operations and  
2 maintenance are not anticipated to require high-profile equipment (i.e., equipment with a vertical  
3 reach of 200 feet or more), the use of which near an airport runway could result in an adverse effect  
4 on aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77) and, as part of an  
5 environmental commitment pursuant to the State Aeronautics Act (See Appendix 3B, *Environmental*  
6 *Commitments, AMMs, and CMs*), DWR would coordinate with Caltrans' Division of Aeronautics prior  
7 to initiating maintenance activities requiring high-profile equipment to assess whether a site  
8 investigation is necessary. If a site investigation is performed, DWR would adhere to Caltrans'  
9 recommendations in order to avoid any adverse effects on air safety. Further, compliance with the  
10 results of the OE/AAA for Byron Airport would reduce the risk for adverse effects on air traffic  
11 safety by implementing recommendations which could include limitations necessary to minimize  
12 potential problems, supplemental notice requirements, and marking and lighting high-profile  
13 structures.

14 During routine operation and maintenance of the water conveyance facilities the potential would  
15 exist for the accidental release of hazardous materials and other potentially hazardous releases (e.g.,  
16 contaminated solids and sediment). Accidental hazardous materials releases, such as chemicals  
17 directly associated with routine maintenance (e.g., fuels, solvents, paints, oils), are likely to be small,  
18 localized, temporary and periodic; therefore, they are unlikely to result in adverse effects on  
19 workers, the public, or the environment. Further, BMPs and measures implemented as part of  
20 SWPPPs, SPCCPs, SAPs, and HMMPs would be developed and implemented as part of the project, as  
21 described under Impact HAZ-1, and in detail as described in Appendix 3B, *Environmental*  
22 *Commitments, AMMs, and CMs*, which would reduce the potential for accidental spills to occur and  
23 would result in containment and remediation of spills should they occur. Solids collected at solids  
24 lagoons and sediment dredged during periodic maintenance dredging at the intakes may contain  
25 potentially hazardous constituents (e.g., persistent pesticides, mercury, PCBs). Contaminated solids  
26 could pose a hazard to the environment if improperly disposed of, which would be an adverse effect.  
27 Implementation of Mitigation Measure HAZ-6 would help ensure that there are no adverse effects on  
28 soil, groundwater or surface water due to improperly disposed of lagoon solids. Dewatered solids  
29 may require special management to meet discharge/disposal requirements. To ensure that  
30 potentially contaminated sediment from maintenance dredging activities at the intakes would not  
31 adversely affect soil, groundwater or surface water, a SAP would be implemented prior to any  
32 dredging activities, as described under Impact HAZ-1 for this alternative. All sediment would be  
33 characterized chemically prior to reuse and/or disposal to ensure that reuse of this material would  
34 not result in a hazard to the public or the environment. Therefore, with implementation of BMPs as  
35 part of environmental commitments and Mitigation Measure HAZ-6, operation and maintenance of  
36 the water conveyance facilities would not create a substantial hazard to the public or the  
37 environment and, accordingly, there would be no adverse effect.

38 **CEQA Conclusion:** The potential for operation and maintenance of conveyance facilities under  
39 Alternative 2D to result in a substantial hazard to the public or environment would be similar to the  
40 effects described for Alternative 4 in Section 24.3.3.9. However, the potential under Alternative 2D  
41 to create substantial hazards through release of hazardous materials during maintenance and  
42 operation off conveyance facilities would be somewhat greater than under Alternative 4 because the  
43 geographic extent and magnitude of O&M activities under Alternative 2D would be greater due to  
44 two additional intakes. The accidental release of hazardous materials (including contaminated solids  
45 and sediment) to the environment during operation and maintenance of the water conveyance  
46 facilities could result in significant impacts on the public and environment. However,

1 implementation of the BMPs and other activities required by SWPPPs, HMMPs, SAPs, SPCCPs, as well  
 2 as adherence to all applicable FAA regulations (14 CFR Part 77) and, as part of an environmental  
 3 commitment pursuant to the State Aeronautics Act (See Appendix 3B, *Environmental Commitments,*  
 4 *AMMs, and CMs*), coordination/compliance with Caltrans' Division of Aeronautics when performing  
 5 work with high-profile equipment within 2 miles of an airport would ensure that impacts are  
 6 reduced to a less-than-significant level. Contaminated solids could pose a hazard to the environment  
 7 if improperly disposed of, and would be considered a significant impact because of the large volume  
 8 of sediment/solids that would be handled and the potential for improper disposal. However,  
 9 implementation of Mitigation Measure HAZ-6, would reduce this impact to a less-than-significant  
 10 level by requiring sampling and characterizing solids from the solids lagoons to evaluate options to  
 11 dispose of material at an appropriate, licensed facility.

12 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 13 **and/or Disposal**

14 Please see Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative 4.

15 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 16 **Release of Hazardous Materials or by Other Means as a Result of Implementing**  
 17 **Environmental Commitments 3, 4, 6-11, and 16**

18 **NEPA Effects:** The potential for construction, operation, and maintenance activities associated with  
 19 the implementation of Environmental Commitments 3, 4, 6-11, and 16 to create hazards to workers,  
 20 the public and the environment would be similar in nature to those described for Impact HAZ-7  
 21 under Alternative 4. However, as described in Chapter 3, *Description of Alternatives*, under  
 22 Alternative 2D the project would restore up to 18,097 acres of habitat under Environmental  
 23 Commitments 3, 4, 6-10 as compared with 83,800 acres under Alternative 4. Environmental  
 24 Commitment 16 under Alternative 2D would consist of installing and operating a nonphysical fish  
 25 barrier at Georgiana Slough only, and would not include the installation of nonphysical fish barriers  
 26 at head of Old River, the Delta Cross Channel, Turner Cut, or Columbia Cut. CM2, CM5, CM13, CM14,  
 27 and CM17-CM21 would not be implemented as part of this alternative. Therefore, the magnitude of  
 28 effects under Alternative 2D would be smaller than those associated with Alternative 4. Regardless,  
 29 hazardous materials associated with the operation of construction equipment could be  
 30 inadvertently released into the environment in the course of the materials' routine transport, use, or  
 31 disposal. Releases could also occur as a result of accidental circumstances during operation and  
 32 maintenance activities, such as the application of herbicides to control nonnative vegetation.  
 33 Similarly, construction activities could encounter known or unknown hazardous materials sites  
 34 located on or in the vicinity of construction sites, creating the potential for their disturbance and  
 35 release. Other activities, including the intentional demolition of existing structures (e.g., buildings)  
 36 and reuse of spoil, dredged material and/or RTM, would also present the potential to generate  
 37 hazards or release hazardous materials. However, prior to the reuse of spoils, dredged material or  
 38 RTM, these materials would undergo chemical characterization, as described in Appendix 3B,  
 39 *Environmental Commitments, AMMs, and CMs*, to ensure that they are not creating a hazard to the  
 40 public and environment. Further, other potential hazards that could result from implementing  
 41 Environmental Commitments include the possible release of hazardous substances in proximity to  
 42 sensitive receptors; the release, in the short-term, of pesticides from former agricultural lands as a  
 43 result of wetland and floodplain restoration; the potential for safety hazards related to construction

1 in the vicinity of an airport; damage or disruption of existing infrastructure such that hazardous  
2 conditions were created; and the potential for wildfire hazards in the vicinity of construction sites.

3 These potential effects, were they to occur, would be considered adverse. However, implementation  
4 of Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a, as well as activities required  
5 by SWPPPs, HMMPs, SAPs, SPCCPs, and fire prevention and fire control BMPs as part of a FPCP  
6 (described under Alternative 4 in Section 24.3.3.9) would reduce/minimize the severity of these  
7 potential effects such that there would be no adverse effect.

8 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
9 public to hazardous substances or conditions during construction, operation, and maintenance of  
10 Environmental Commitments 3, 4, 6–11, and 16, is considered significant because implementation of  
11 these Environmental Commitments would involve extensive use of heavy equipment during  
12 construction and transporting hazardous chemicals during operations and maintenance (e.g.,  
13 herbicides for nonnative vegetation control). These chemicals could be inadvertently released,  
14 exposing construction workers or the public to hazards. Construction of restoration projects on or  
15 near existing agricultural and industrial land and/or SOCs may also result in a conflict with or  
16 exposure to known hazardous materials, and the use of high-profile equipment (i.e., 200 feet or  
17 higher) in close proximity to airport runways could result in safety hazards to air traffic. These  
18 effects, were they to occur, would be considered a significant impact. However, in addition to  
19 implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and fire prevention and fire control BMPs as part  
20 of a FPCP (described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*), Mitigation  
21 Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented to ensure no  
22 substantial hazards to the public or the environment would result from implementation of  
23 Environmental Commitments 3, 4, 6–11, and 16. Accordingly, this impact would be less than  
24 significant.

25 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
26 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
27 **Construction Footprint, and Remediate and/or Contain Contamination**

28 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
29 4. Implementation of this mitigation measure will result in the avoidance, successful  
30 remediation or containment of all known or suspected contaminated areas, as applicable, within  
31 the construction footprint, which would prevent the release of hazardous materials from these  
32 areas into the environment.

33 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
34 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
35 **Dispose of Them in Accordance with Applicable Regulations**

36 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
37 4. Implementation of this measure will ensure that hazardous materials present in or associated  
38 with structures being demolished will not be released into the environment.

39 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

40 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 4 in  
41 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 2           **Minimizes Any Effect on Worker and Public Health and Safety**

3           Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 4 in  
 4           Chapter 20, *Public Services and Utilities*.

5           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 6           **Plan**

7           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 8           4 in Chapter 19, *Transportation*.

9           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 10          **Environmental Commitments that Create or Improve Wildlife Habitat**

11          **NEPA Effects:** Effects of Alternative 2D related to the potential for increased risk of aircraft bird  
 12          strikes from implementing restoration actions that improve wildlife habitat would be similar to  
 13          those described for Alternative 4 in Section 24.3.3.9. However, as described in Chapter 3, *Description*  
 14          *of Alternatives*, Alternative 2D would restore up to 18,097 acres of habitat under Environmental  
 15          Commitments 3, 4, and 6–11 as compared with 83,800 acres with CM3–CM11 under Alternative 4.  
 16          Therefore, the magnitude of effects under Alternative 2D would likely be smaller than those  
 17          associated with Alternative 4.

18          Implementation of Environmental Commitments 3, 4, and 6–11 under Alternative 2D could result in  
 19          an increase of aircraft bird strikes in the vicinity of restoration areas that attract waterfowl and  
 20          other birds in proximity to local airports. This effect is considered adverse because of the potential  
 21          to affect aircraft safety in the vicinity of restoration projects. Mitigation Measure HAZ-8 is available  
 22          to reduce the severity of this effect such that it would not be adverse.

23          **CEQA Conclusion:** Implementation of Environmental Commitments 3, 4, and 6–11, because they  
 24          would create or improve wildlife habitat, could potentially attract waterfowl and other birds to  
 25          areas in proximity to existing airport flight zones, and thereby potentially result in an increase in  
 26          bird-aircraft strikes. The potential for this impact is considered significant because of the increased  
 27          wildlife restoration projects that could occur in the vicinity of Travis Air Force Base; Rio Vista  
 28          Municipal Airport; Funny Farm Airport; Sacramento International Airport; and Byron Airport.  
 29          Mitigation Measure HAZ-8 could reduce the severity of this impact by minimizing bird strike  
 30          hazards, but this impact would not be reduced to a less-than-significant level because of the  
 31          inherent uncertainty related to bird strike risks for these future projects. Therefore this impact is  
 32          significant and unavoidable.

33          **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 34          **Regulatory Agencies**

35          Please see Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative 4.

#### 24.3.4.4 Alternative 5A—Dual Conveyance with Modified Pipeline/Tunnel and Intake 2 (3,000 cfs; Operational Scenario C)

##### Impact HAZ-1: Create a Substantial Hazard to the Public or the Environment through the Release of Hazardous Materials or by Other Means during Construction of the Water Conveyance Facilities

**NEPA Effects:** Alternative 5A would include the same physical/structural components as Alternative 4 but would include one intake (Intake 2) rather than three. The nature of the impacts related to hazards and hazardous materials under Alternative 5A would be similar to those impacts described under Alternative 4 in Section 24.3.3.9. However, the potential under Alternative 5A to create substantial hazards through release of hazardous materials during construction of conveyance facilities would be less than under Alternative 4 due to two fewer intakes because the geographic extent, magnitude and duration of construction under Alternative 5A would be smaller. Potential hazards associated with natural gas accumulation in tunnels, existing contaminants in soil, sediment or groundwater, hazardous constituents present in RTM, infrastructure containing hazardous materials, and routine transportation of hazardous materials would be similar to those described under Alternative 4. Because only Intake 2 would be built under this alternative, however, implementation would avoid any site-specific contaminants or hazardous materials associated with the construction of Intakes 3 and 5.

The construction contractor would be required to prepare an emergency plan prior to construction of the tunnels (Title 8, Division 1, Chapter 4, Subchapter 20, Article 9, “Emergency Plan and Precautions”). This plan would outline the duties and responsibilities of all employees in the event of a fire, explosion or other emergency. The plan would include maps, evacuation plans, rescue procedures, communication protocol, and check-in/check-out procedures. Copies of the plan would be given to the local fire or designated off-site rescue teams and the Division.

Hazardous constituents associated with RTM, generated during tunnel construction are not anticipated; however, the possibility exists for RTM and decanted water to pose a hazard to the construction workers, the public, or the environment. It is anticipated that all tunnel boring additives would be non-toxic and biodegradable. Regardless, before the RTM could be re-used or returned to the environment, it would be managed to comply with NPDES permit requirements, and at a minimum would go through a drying/water-solids separation process and a possible physical or chemical treatment following chemical characterization (including RTM decant liquid).

Existing infrastructure, including 8 known inactive gas wells and no known active oil or gas wells, also have the potential to release hazardous materials, as would the transport of hazardous materials during facility construction. The number of existing gas and petroleum product pipelines, and transmission lines within the proposed construction footprint of Alternative 5A would be the same as under Alternative 4 (Table 24-3). Additionally, as described for Alternative 4, permanent structures would be removed or relocated within the water conveyance facility footprint. Because Alternative 5A would include only one intake, it is anticipated that fewer structures would be impacted than under Alternative 4. These structures could include residential buildings, storage or agricultural support facilities, recreational facilities (e.g., pools and docks), and other types of structures (e.g., power/utility structures and other types of infrastructure). As described under Alternative 4, these structures may contain hazardous materials that would require proper handling and disposal, if demolition is necessary. As described for Impact HAZ-1 under Alternative 4

1 Mitigation Measure HAZ-1b would be implemented by DWR to ensure that there are no adverse  
2 effects related to structure demolition due to hazardous materials.

3 As described for Alternative 4 under Impact HAZ-1, in general, the transportation of hazardous  
4 materials via trucks, trains and ships poses potential risks associated with the accidental release of  
5 these materials to the environment. Rerouting vehicular traffic carrying hazardous materials during  
6 construction of the water conveyance facilities could increase the risk of accidental release due to  
7 inferior road quality or lack of driver familiarity with the modified routes. Hazardous materials  
8 transportation routes are presented in Figure 24-2 and in Table 24-4. Routes anticipated to be  
9 affected during construction of the water conveyance facilities are described in Chapter 19,  
10 *Transportation*. Barges supporting water conveyance facilities construction may also transport  
11 hazardous materials such as fuels and lubricants or other chemicals. The potential exists for  
12 accidental release of hazardous materials from project-related barges. To avoid effects on the  
13 environment related to this issue, BMPs would be implemented as part of a Barge Operations Plan  
14 (as discussed under Impact HAZ-1 for Alternative 4 and in Appendix 3B, *Environmental*  
15 *Commitments, AMMs, and CMs*) that would reduce the potential for accidental releases of hazardous  
16 materials during transport and transfer. Finally, under this alternative, the proposed conveyance  
17 crosses under the existing BNSF/Amtrak San Joaquin line between Bacon Island and Woodward  
18 Island; however, the effect of this crossing would likely be minimal because the conveyance would  
19 traverse the railroad in a deep bore tunnel (see Chapter 19, *Transportation*, for discussion). Further,  
20 the UPRR runs proximate to the construction area of the proposed Byron Tract Forebay; however,  
21 construction is unlikely to disrupt rail service because much of this line has not been in service  
22 recently. Mitigation measures would be in place to ensure that there are no adverse effects on road,  
23 rail, or water transportation, and, thus, the potential for the construction of the water conveyance  
24 facilities to pose risks related to the transportation of hazardous materials would be minimal. As  
25 described in Chapter 19, *Transportation*, under Mitigation Measure TRANS-1a, a site-specific  
26 construction traffic management plan, taking into account hazardous materials transportation,  
27 would be prepared and implemented prior to initiation of construction of water conveyance  
28 facilities. Finally, any potential effects on rail traffic and any hazardous materials transport therein  
29 during construction would be reduced with implementation of Mitigation Measure TRANS-1a, which  
30 would include stipulations to coordinate with rail providers to develop alternative interim  
31 transportation modes (e.g., trucks or buses) that could be used to provide freight and/or passenger  
32 service during any longer term railroad closures and daily construction time windows during which  
33 construction would be restricted or rail operations would need to be suspended for any activity  
34 within railroad rights of way. This would minimize the potential risk of release of hazardous  
35 materials being transported via these rails (see Chapter 19, *Transportation*, for a description).

36 As noted in the discussion of Impact HAZ-1 under Alternative 4, project design would minimize, to  
37 the extent feasible, the need to acquire or traverse areas where the presence of hazardous materials  
38 is suspected or has been verified. Further, environmental commitments would be implemented,  
39 including SWPPPs, SPCCPs, SAPs, and HMMPs; a Barge Operations Plan; and chemical  
40 characterization of RTM prior to reuse (e.g., RTM in levee reinforcement) or discharge. The  
41 environmental commitments would reduce these potential hazards associated with water  
42 conveyance facilities construction. Additionally, the implementation of Mitigation Measures HAZ-1a  
43 and HAZ-1b, UT-6a and UT-6c (described in Chapter 20, *Public Services and Utilities*), and TRANS-1a  
44 (described in Chapter 19, *Transportation*) would further reduce the potential severity of this impact.  
45 As such, construction of the water conveyance facilities would not create a substantial hazard to the

1 public or the environment through the routine transport, use, or disposal of hazardous materials or  
 2 the upset/accidental release of these materials. Thus, this effect would not be adverse.

3 **CEQA Conclusion:** During construction of the water conveyance facilities, the potential for direct  
 4 impacts on construction personnel, the public and/or the environment associated with a variety of  
 5 hazardous physical or chemical conditions under Alternative 5A would be less than under  
 6 Alternative 4 because there would be two fewer intakes. The nature of the impacts, however, would  
 7 be similar to those described for Alternative 4 in Section 24.3.3.9. Impacts related to hazards and/or  
 8 hazardous materials may arise as a result of the intensity and duration of construction activities at  
 9 the north Delta intakes, forebays and conveyance pipelines and tunnels, and the hazardous  
 10 materials that would be needed in these areas during construction. Potential hazards include the  
 11 routine use of hazardous materials (as defined by Title 22 of the California Code of Regulations,  
 12 Division 4.5); natural gas accumulation in water conveyance tunnels; the inadvertent release of  
 13 existing contaminants in soil, sediment, and groundwater, or release of hazardous materials from  
 14 existing infrastructure; disturbance of electrical transmission lines; and hazardous constituents  
 15 present in RTM. Additionally, the potential would exist for the construction of the water conveyance  
 16 facilities to indirectly result in the release of hazardous materials through the disruption of existing  
 17 road, rail, or river hazardous materials transport routes because construction would occur in the  
 18 vicinity of three hazardous material transport routes, three railroad corridors, and waterways with  
 19 barge traffic. These impacts are considered significant because the potential exists for substantial  
 20 hazard to the public or environment to occur related to conveyance facility construction. However,  
 21 implementation of Mitigation Measures HAZ-1a and HAZ-1b, UT-6a, and UT-6c (described in  
 22 Chapter 20, *Public Services and Utilities*), and TRANS-1a (described in Chapter 19, *Transportation*),  
 23 along with environmental commitments to prepare and implement SWPPPs, HMMPs, SPCCPs, SAPs,  
 24 and a Barge Operations Plan (described in Appendix 3B, *Environmental Commitments, AMMs, and*  
 25 *CMs*) would reduce these impacts to a less-than-significant level by identifying and describing  
 26 potential sources of hazardous materials so that releases can be avoided and materials can be  
 27 properly handled; detailing practices to monitor pollutants and control erosion so that appropriate  
 28 measures are taken; implementing onsite features to minimize the potential for hazardous materials  
 29 to be released to the environment; minimizing risk associated with the relocation of utility  
 30 infrastructure; and coordinating the transport of hazardous materials to reduce the risk of spills.

31 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 32 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 33 **Construction Footprint, and Remediate and/or Contain Contamination**

34 Please see Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative 4.

35 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 36 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 37 **Dispose of Them in Accordance with Applicable Regulations**

38 Please see Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative 4.

39 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

40 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 4 in  
 41 Chapter 20, *Public Services and Utilities*.

1           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 2           **Minimizes Any Effect on Worker and Public Health and Safety**

3           Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 4 in  
 4           Chapter 20, *Public Services and Utilities*.

5           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 6           **Plan**

7           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 8           4 in Chapter 19, *Transportation*.

9           **Impact HAZ-2: Expose Sensitive Receptors Located within 0.25 Mile of a Construction Site to**  
 10          **Hazardous Materials, Substances, or Waste during Construction of the Water Conveyance**  
 11          **Facilities**

12          **NEPA Effects:** An adverse effect may occur if a construction work site is located within 0.25 mile of  
 13          an existing or proposed school, or other sensitive receptor, and releases hazardous materials that  
 14          pose a health hazard. However, no schools, parks or hospitals are located within 0.25 mile of  
 15          Alternative 5A. Therefore, no sensitive receptors would be exposed to hazardous materials,  
 16          substances, or waste during construction of the water conveyance facilities under Alternative 5A. As  
 17          such, there would be no effect. Potential air quality effects on sensitive receptors are discussed in  
 18          Chapter 22, *Air Quality and Greenhouse Gases*.

19          **CEQA Conclusion:** There are no schools, parks or hospitals located within 0.25 mile of the  
 20          Alternative 5A water conveyance facilities alignment, therefore, there would be no impact due to  
 21          exposure of sensitive receptors to hazardous materials, substances or waste during construction of  
 22          the water conveyance facilities. Accordingly, there would be no impact. No mitigation is required.  
 23          Potential air quality effects on sensitive receptors are discussed in Chapter 22, *Air Quality and*  
 24          *Greenhouse Gases*.

25          **Impact HAZ-3: Potential to Conflict with a Known Hazardous Materials Site and, as a Result,**  
 26          **Create a Significant Hazard to the Public or the Environment**

27          **NEPA Effects:** Alternative 5A would include the same physical/structural components as Alternative  
 28          4 but would include two fewer intakes. The nature of the impacts related to hazards and hazardous  
 29          materials under Alternative 5A would be similar to those impacts described under Alternative 4 in  
 30          Section 24.3.3.9. However, the potential under Alternative 5A to create conflicts with, or result in  
 31          exposure to known hazardous material sites during conveyance facility construction would be  
 32          smaller than under Alternative 4 because the geographic extent, magnitude and duration of  
 33          construction under Alternative 5A would be smaller. However, because there are no "Cortese List"  
 34          sites or known SOCs within the construction footprint of the water conveyance facility of Alternative  
 35          5A, there would be no conflict with known hazardous materials sites during construction of the  
 36          water conveyance facilities, and therefore, no related hazard to the public or the environment.  
 37          Therefore, there would be no effect. The potential for encountering unknown hazardous materials  
 38          sites during the course of construction is discussed under Impact HAZ-1.

39          **CEQA Conclusion:** The potential under Alternative 5A to create the potential for conflicts with, or  
 40          result in exposure to known hazardous material sites during conveyance facility construction under  
 41          Alternative 5A would be smaller than under Alternative 4 because the geographic extent, magnitude

1 and duration of construction due to two fewer intakes. However, because there are no “Cortese List”  
2 sites or known SOCs within the construction footprint of the water conveyance facility under this  
3 alternative, there would be no conflict with known hazardous materials sites during construction of  
4 the water conveyance facilities, and therefore, no related hazard to the public or the environment.  
5 Accordingly, there would be no impact. No mitigation is required. The potential for encountering  
6 unknown hazardous materials sites during the course of construction is discussed under Impact  
7 HAZ-1.

8 **Impact HAZ-4: Result in a Safety Hazard Associated with an Airport or Private Airstrip within**  
9 **2 Miles of the Water Conveyance Facilities Footprint for People Residing or Working in the**  
10 **Study Area during Construction of the Water Conveyance Facilities**

11 **NEPA Effects:** The potential for construction of conveyance facilities under Alternative 5A to result  
12 in a safety hazard associated with activities within 2 miles of an airport or private airstrip is similar  
13 to effects described for Alternative 4 in Section 24.3.3.9. However, because there would be two  
14 fewer intakes under this alternative relative to Alternative 4, the geographical extent of Alternative  
15 5A would be smaller. Three private airports (Borges-Clarksburg Airport, Flying B Ranch Airport and  
16 Spezia Airport) and two public airports (Byron Airport and Franklin Field Airport) are located  
17 within 2 miles of the water conveyance facilities for Alternative 5A (Figure 24-9 and Table 24-6).  
18 The Borges-Clarksburg Airport, located 2 miles northeast of the town of Clarksburg, is within 2  
19 miles of a tunnel work area, a temporary access road, and a RTM area. Spezia Airport, on Tyler  
20 Island, is within 2 miles of two ventilation/access shafts, a tunnel work area, and a permanent  
21 access road. Flying B Ranch Airport, in Elk Grove, is within 2 miles of a proposed temporary 230-kV  
22 transmission line. Byron Airport, less than 1.5 miles west of Clifton Court Forebay, is within 2 miles  
23 of a proposed RTM area; a proposed permanent access road, as well as a temporary access road; a  
24 proposed permanent 230-kV transmission line; temporary work areas; and a siphon and a canal  
25 related to the proposed expansion of Clifton Court Forebay. Franklin Field Airport, approximately 4  
26 miles southeast of Franklin, is less than 1 mile from a proposed temporary 230-kV transmission line.  
27 In addition, an existing 230-kV and 500-kV transmission line, both located south of Clifton Court  
28 Forebay, would be relocated to an area further south/southeast within 0.5 mile of their original  
29 location. However, because the nearest airport, Byron Airport, is over 3 miles away, this work is not  
30 expected to pose an air safety hazard. Because construction of the proposed transmission lines  
31 would potentially require high-profile equipment (e.g., cranes), and because construction of the 230-  
32 kV transmission line and relocation of an existing 230-kV and a 500-kV transmission line (south of  
33 Clifton Court Forebay) would require the use of helicopters during the stringing phase, the safety of  
34 air traffic arriving or departing from either of these airports could be compromised during  
35 construction of the proposed transmission lines.

36 This potential for implementation of Alternative 5A to result in a safety hazard associated with an  
37 airport or private airstrip within 2 miles of the water conveyance facility is not considered adverse  
38 because, as described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, as part of an  
39 environmental commitment pursuant to the State Aeronautics Act, DWR would coordinate with  
40 Caltrans’ Division of Aeronautics to eliminate any potential conflicts prior to initiating construction  
41 and comply with its recommendations based on its investigations and compliance with the  
42 recommendations of the OE/AAA (14 CFR Part 77) for Byron and Franklin Field Airports.  
43 Accordingly, there would be no adverse effect.

1 **CEQA Conclusion:** The potential for construction of conveyance facilities under Alternative 5A to  
 2 result in a safety hazard associated with activities within 2.0 miles of an airport or private airstrip is  
 3 similar in nature to impacts described for Alternative 4 in Section 24.3.3.9, although there would be  
 4 two fewer intakes relative to Alternative 4 so the geographical extent of Alternative 5A would be  
 5 smaller. The use of helicopters for stringing the proposed 230-kV transmission lines and relocating  
 6 the existing 230-kV and 500-kV transmission lines, and of high-profile construction equipment (200  
 7 feet or taller), such as cranes, for installation of pipelines, and potentially pile drivers, such as would  
 8 be used during the construction of the intakes, have the potential to result in safety hazards to  
 9 aircraft during takeoff and landing if the equipment is operated too close to runways. Three private  
 10 airports (Borges-Clarksburg Airport, Flying B Ranch Airport, and Spezia Airport) and two public  
 11 airports (Byron Airport) are located within 2 miles of the water conveyance facilities for Alternative  
 12 5A.

13 As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, as part of an  
 14 environmental commitment pursuant to the State Aeronautics Act, DWR would coordinate with  
 15 Caltrans' Division of Aeronautics prior to initiating construction and comply with its  
 16 recommendations based on its investigations and compliance with the recommendations of the  
 17 OE/AAA (for Byron Airport and Franklin Field Airport). These recommendations, which could  
 18 include limitations necessary to minimize potential problems such as the use of temporary  
 19 construction equipment, supplemental notice requirements, and marking and lighting high-profile  
 20 structures, would reduce potential impacts on air safety. This impact would be less than significant  
 21 because recommendations to avoid conflicts with existing airports located near construction areas  
 22 would be implemented by DWR prior to construction as required by Caltrans. No mitigation is  
 23 required.

24 **Impact HAZ-5: Expose People or Structures to a Substantial Risk of Property Loss, Personal**  
 25 **Injury or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to**  
 26 **Urbanized Areas or Where Residences are Intermixed with Wildlands, as a Result of**  
 27 **Construction, and Operation and Maintenance of the Water Conveyance Facilities**

28 **NEPA Effects:** The potential for construction of conveyance facilities under Alternative 5A to result  
 29 in exposure of people or structures to risks associated with wildfire would be similar to the impacts  
 30 described for Alternative 4 in Section 24.3.3.9. However, because there would be two fewer intakes  
 31 under Alternative 5A relative to Alternative 4, the geographical extent of potential impacts under  
 32 Alternative 5A would be smaller. Regardless, this potential effect is not adverse because no portion  
 33 of Alternative 5A is located in or near an area designated as a High or Very High Fire Hazard Severity  
 34 Zone and measures to prevent and control wildland fires would be implemented by DWR during  
 35 construction, operation, and maintenance of the water conveyance facilities in full compliance with  
 36 Cal-OSHA standards for fire safety and prevention. As such, there would be no adverse effect.

37 **CEQA Conclusion:** The potential for construction of conveyance facilities under Alternative 5A to  
 38 result in exposure of people or structures to risks associated with wildfire would be similar to the  
 39 impacts described for Alternative 4 in Section 24.3.3.9. However, because there would be two fewer  
 40 intakes under Alternative 5A relative to Alternative 4, the geographical extent of potential impacts  
 41 under Alternative 5A would be smaller. People or structures would not be subject to a significant  
 42 risk of loss, injury or death involving wildland fires during construction or operation and  
 43 maintenance of the water conveyance facilities because the alternative would comply with Cal-OSHA  
 44 fire prevention and safety standards; DWR would implement standard fire safety and prevention  
 45 measures as part of an FPCP (described in Appendix 3B, *Environmental Commitments, AMMs, and*

1 *CMs*); and because the water conveyance facilities would not be located in a High or Very High Fire  
 2 Hazard Severity Zone. This impact would be less than significant because conditions do not exist  
 3 near construction areas that would result in exposure of people or structures to significant risk of  
 4 exposure to wildfire and DWR would implement standard fire safety and prevention measures. No  
 5 mitigation is required.

6 **Impact HAZ-6: Create a Substantial Hazard to the Public or the Environment through the**  
 7 **Release of Hazardous Materials or by Other Means during Operation and Maintenance of the**  
 8 **Water Conveyance Facilities**

9 ***NEPA Effects:*** Alternative 5A would include the same physical/structural components as Alternative  
 10 4 but would include two fewer intakes. The nature of the impacts related to hazards and hazardous  
 11 materials under Alternative 5A would be similar to those impacts described under Alternative 4 in  
 12 Section 24.3.3.9. However, the potential under Alternative 5A to create substantial hazards through  
 13 release of hazardous materials during maintenance and operation of the water conveyance facilities  
 14 would be smaller than under Alternative 4 because the geographic extent and magnitude of O&M  
 15 activities would be smaller due to two fewer intakes under this alternative.

16 The Borges-Clarksburg Airport, Flying B Ranch Airport and Spezia Airport (private air facilities), and  
 17 the Byron Airport and Franklin Field Airport (public airports), are within 2 miles of the Alternative  
 18 5A construction footprint, as discussed under Impact HAZ-1 for this alternative. With the exception  
 19 of power transmission lines supplying power to pumps, and other equipment used for water  
 20 conveyance facilities operation and maintenance, water conveyance facilities operations and  
 21 maintenance are not anticipated to require high-profile equipment (i.e., equipment with a vertical  
 22 reach of 200 feet or more), the use of which near an airport runway could result in an adverse effect  
 23 on aircraft. DWR would adhere to all applicable FAA regulations (14 CFR Part 77 [described in  
 24 Section 24.2, *Regulatory Setting*]) and coordinate with Caltrans' Division of Aeronautics (as  
 25 described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*) prior to initiating  
 26 maintenance activities requiring high-profile equipment to assess whether a site investigation is  
 27 necessary. If a site investigation is performed, DWR would adhere to Caltrans' recommendations in  
 28 order to avoid any adverse effects on air safety. Further, compliance with the results of the OE/AAA  
 29 for Byron and Franklin Field Airports would reduce the risk for adverse effects on air traffic safety  
 30 by implementing recommendations which could include limitations necessary to minimize potential  
 31 problems, supplemental notice requirements, and marking and lighting high-profile structures.

32 During routine operation and maintenance of the water conveyance facilities the potential would  
 33 exist for the accidental release of hazardous materials and other potentially hazardous releases (e.g.,  
 34 contaminated solids and sediment). Accidental hazardous materials releases, such as chemicals  
 35 directly associated with routine maintenance (e.g., fuels, solvents, paints, oils), are likely to be small,  
 36 localized, temporary and periodic; therefore, they are unlikely to result in adverse effects on  
 37 workers, the public, or the environment. Further, BMPs and measures implemented as part of  
 38 SWPPPs, SPCCPs, SAPs and HMMPs would be developed and implemented as part of the project, as  
 39 described under Impact HAZ-1, and in detail in described in Appendix 3B, *Environmental*  
 40 *Commitments, AMMs, and CMs*, which would reduce the potential for accidental spills to occur and  
 41 would result in containment and remediation of spills should they occur. Solids collected at solids  
 42 lagoons and sediment dredged during periodic maintenance dredging at the intakes may contain  
 43 potentially hazardous constituents (e.g., persistent pesticides, mercury, PCBs). Contaminated solids  
 44 could pose a hazard to the environment if improperly disposed of, which would be an adverse effect.  
 45 Implementation of Mitigation Measure HAZ-6 (described below) would help ensure that there are

1 no adverse effects on soil, groundwater or surface water due to improperly disposed of lagoon  
 2 solids. Dewatered solids may require special management to meet discharge/disposal requirements.  
 3 To ensure that potentially contaminated sediment from maintenance dredging activities at the  
 4 intakes would not adversely affect soil, groundwater or surface water, a SAP would be implemented  
 5 prior to any dredging activities, as described under Impact HAZ-1 for this alternative. All sediment  
 6 would be characterized chemically prior to reuse and/or disposal to ensure that reuse of this  
 7 material would not result in a hazard to the public or the environment.

8 Therefore, with implementation of BMPs as part of environmental commitments and Mitigation  
 9 Measure HAZ-6, operation and maintenance of the water conveyance facilities would not create a  
 10 substantial hazard to the public or the environment and, accordingly, there would be no adverse  
 11 effect.

12 **CEQA Conclusion:** The potential for operation and maintenance of conveyance facilities under  
 13 Alternative 5A to result in a substantial hazard to the public or environment would be similar to the  
 14 effects described for Alternative 4 in Section 24.3.3.9. However, the potential under Alternative 5A  
 15 to create substantial hazards through release of hazardous materials during maintenance and  
 16 operation off conveyance facilities would be less than under Alternative 4 because the geographic  
 17 extent and magnitude of O&M activities under this alternative would be smaller due to two fewer  
 18 intakes. The accidental release of hazardous materials (including contaminated solids and sediment)  
 19 to the environment during operation and maintenance of the water conveyance facilities could  
 20 result in significant impacts on the public and environment. However, implementation of the BMPs  
 21 and other activities required by SWPPPs, HMMPs, SAPs, SPCCPs, as well as adherence to all  
 22 applicable FAA regulations (14 CFR Part 77 [described in Section 24.2, *Regulatory Setting*]) and,  
 23 pursuant to the State Aeronautics Act, coordination/compliance with Caltrans' Division of  
 24 Aeronautics when performing work with high-profile equipment within 2 miles of an airport would  
 25 ensure that impacts are reduced to a less-than-significant level. Contaminated solids could pose a  
 26 hazard to the environment if improperly disposed of, and would be considered a significant impact  
 27 because of the large volume of sediment/solids that would be handled and the potential for  
 28 improper disposal. However, implementation of Mitigation Measure HAZ-6, would reduce this  
 29 impact to a less-than-significant level by requiring sampling and characterizing solids from the  
 30 solids lagoons to evaluate options to dispose of material at an appropriate, licensed facility.

31 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 32 **and/or Disposal**

33 Please see Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative 4.

34 **Impact HAZ-7: Create a Substantial Hazard to the Public or the Environment through the**  
 35 **Release of Hazardous Materials or by Other Means as a Result of Implementing**  
 36 **Environmental Commitments 3, 4, 6–11, and 16**

37 **NEPA Effects:** Effects of Alternative 5A related to the potential for release of hazardous materials  
 38 from implementing Environmental Commitments 3, 4, 6–11, and 16 would be similar to those  
 39 described for Alternative 4 in Section 24.3.3.9. However, as described Chapter 3, *Description of*  
 40 *Alternatives*, under Alternative 5A the project would restore up to 15,156 acres of habitat under  
 41 Environmental Commitments 3, 4, 6–10 as compared with 83,800 acres under Alternative 4.  
 42 Environmental Commitment 16 under Alternative 5A would consist of installing and operating a  
 43 nonphysical fish barrier at Georgiana Slough only, and would not include the installation of

1 nonphysical fish barriers at head of Old River, the Delta Cross Channel, Turner Cut, or Columbia Cut.  
2 CM13, CM14, and CM18 would not be implemented as part of this alternative. Therefore, the  
3 magnitude of effects under Alternative 5A would be smaller than those associated with Alternative  
4 4. Regardless, hazardous materials associated with the operation of construction equipment could  
5 be inadvertently released into the environment in the course of the materials' routine transport, use,  
6 or disposal. Releases could also occur as a result of accidental circumstances during operation and  
7 maintenance activities, such as the application of herbicides to control nonnative vegetation.  
8 Similarly, construction activities could encounter known or unknown hazardous materials sites  
9 located on or in the vicinity of construction sites, creating the potential for their disturbance and  
10 release. Other activities, including the intentional demolition of existing structures (e.g., buildings)  
11 and reuse of spoil, dredged material and/or RTM, would also present the potential to generate  
12 hazards or release hazardous materials. However, prior to the reuse of spoils, dredged material or  
13 RTM, these materials would undergo chemical characterization, as described in Appendix 3B,  
14 *Environmental Commitments, AMMs, and CMs*, to ensure that they are not creating a hazard to the  
15 public and environment. Further, other potential hazards that could result from implementing  
16 Environmental Commitments include the possible release of hazardous substances in proximity to  
17 sensitive receptors; the release, in the short-term, of pesticides from former agricultural lands as a  
18 result of wetland and floodplain restoration; the potential for safety hazards related to construction  
19 in the vicinity of an airport; damage or disruption of existing infrastructure such that hazardous  
20 conditions were created; and the potential for wildfire hazards in the vicinity of construction sites.  
21 These potential effects, were they to occur, would be adverse. However, implementation of  
22 Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a, as well as activities required by  
23 SWPPPs, HMMPs, SAPs, SPCCPs, and fire prevention and fire control BMPs as part of a FPCP  
24 (described under Alternative 4 in Section 24.3.3.9) would reduce/minimize the severity of these  
25 potential effects such that there would be no adverse effect.

26 **CEQA Conclusion:** The potential for impacts related to the release and exposure of workers and the  
27 public to hazardous substances or conditions during construction, operation, and maintenance of  
28 Environmental Commitments 3, 4, 6–11, and 16 under Alternative 5A is considered significant  
29 because implementation of these Environmental Commitments would involve extensive use of  
30 heavy equipment during construction and transporting hazardous chemicals during operations and  
31 maintenance (e.g., herbicides for nonnative vegetation control). These chemicals could be  
32 inadvertently released, exposing construction workers or the public to hazards. Construction of  
33 restoration projects on or near existing agricultural and industrial land and/or SOCs may also result  
34 in a conflict with or exposure to known hazardous materials, and the use of high-profile equipment  
35 (i.e., 200 feet or higher) in close proximity to airport runways could result in safety hazards to air  
36 traffic. These effects, were they to occur, would be considered a significant impact. However in  
37 addition to implementation of SWPPPs, HMMPs, SPCCPs, SAPs, and fire prevention and fire control  
38 BMPs as part of a FPCP (described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*),  
39 Mitigation Measures HAZ-1a, HAZ-1b, UT-6a, UT-6c, and TRANS-1a would be implemented to ensure  
40 no substantial hazards to the public or the environment would occur from implementation of  
41 Environmental Commitments 3, 4, 6–11, and 16. Accordingly, this impact would be less than  
42 significant.

1           **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 2           **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 3           **Construction Footprint, and Remediate and/or Contain Contamination**

4           Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 5           4. Implementation of this mitigation measure will result in the avoidance, successful  
 6           remediation or containment of all known or suspected contaminated areas, as applicable, within  
 7           the construction footprint, which would prevent the release of hazardous materials from these  
 8           areas into the environment.

9           **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 10           **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 11           **Dispose of Them in Accordance with Applicable Regulations**

12           Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 13           4. Implementation of this measure will ensure that hazardous materials present in or associated  
 14           with structures being demolished will not be released into the environment.

15           **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

16           Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 4 in  
 17           Chapter 20, *Public Services and Utilities*.

18           **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 19           **Minimizes Any Effect on Worker and Public Health and Safety**

20           Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 4 in  
 21           Chapter 20, *Public Services and Utilities*.

22           **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 23           **Plan**

24           Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 25           4 in Chapter 19, *Transportation*.

26           **Impact HAZ-8: Increased Risk of Bird–Aircraft Strikes during Implementation of**  
 27           **Environmental Commitments that Create or Improve Wildlife Habitat**

28           **NEPA Effects:** Effects of Alternative 5A related to the potential for increased risk of aircraft bird  
 29           strikes from implementing restoration actions that improve wildlife habitat would be similar to  
 30           those described for Alternative 4 in Section 24.3.3.9. However, as described in Chapter 3, *Description*  
 31           *of Alternatives*, Alternative 5A would restore up to 15,156 acres of habitat under Environmental  
 32           Commitments 3, 4, 6–11 as compared with 83,800 acres with CM3–CM11 under Alternative 4 in  
 33           Section 24.3.3.9. Therefore, the magnitude of effects under Alternative 5A would likely be smaller  
 34           than those associated with Alternative 4.

35           Implementation of Environmental Commitments 3, 4, and 6–11 under Alternative 5A could result in  
 36           an increase of bird-aircraft strikes in the vicinity of restoration areas that attract waterfowl and  
 37           other birds in proximity to local airports (Travis Air Force Base; Rio Vista Municipal Airport; Funny  
 38           Farm Airport; Sacramento International Airport; and Byron Airport). This effect is considered  
 39           adverse because of the potential to affect aircraft safety in the vicinity of restoration projects.

1 Mitigation Measure HAZ-8 is available to reduce the severity of this effect such that it would not be  
2 adverse.

3 **CEQA Conclusion:** Under Alternative 5A, implementation of Environmental Commitments 3, 4, and  
4 6–11, because they would create or improve wildlife habitat, could potentially attract waterfowl and  
5 other birds to areas in proximity to existing airport flight zones, and thereby potentially result in an  
6 increase in bird-aircraft strikes. The potential for this impact is considered significant because of the  
7 increased wildlife restoration projects that could occur in the vicinity of Travis Air Force Base; Rio  
8 Vista Municipal Airport; Funny Farm Airport; Sacramento International Airport; and Byron Airport.  
9 Mitigation Measure HAZ-8 could reduce the severity of this impact by minimizing bird strike  
10 hazards, but this impact would not be reduced to a less-than-significant level because of the  
11 inherent uncertainty related to bird strike risks for these future projects. Therefore this impact  
12 would be significant and unavoidable.

13 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
14 **Regulatory Agencies**

15 Please see Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative 4.

16 **24.3.5 Cumulative Analysis**

17 This cumulative impact analysis considers past, present, and reasonably foreseeable future projects  
18 that could affect the same resources and, where relevant, occur within the same time frame as the  
19 action alternatives. When the effects of any of the action alternatives, as they relate to hazards and  
20 hazardous materials, are considered in connection with the potential effects of projects listed in  
21 Table 24-7, the effects could be cumulatively adverse. Projects in Table 24-7 are provided as  
22 examples of projects that could potentially result in adverse effects related to hazards and  
23 hazardous materials during construction and/or operation and maintenance. Additional projects  
24 considered in the cumulative analysis are provided in Appendix 3D, *Defining Existing Conditions, No*  
25 *Action Alternative, No Project Alternative, and Cumulative Impact Conditions.*

1 **Table 24-7. Effects Related to Hazards and Hazardous Materials from the Plans, Policies, and Programs**  
 2 **Considered for Cumulative Analysis**

Agency	Program/ Project	Status	Description of Program/Project	Effects related to Hazards and Hazardous Materials
Department of Water Resources	North Delta Flood Control and Ecosystem Restoration Project	Final EIR complete	Project implements flood control and ecosystem restoration benefits in the north Delta	Hazardous materials used during project construction could be inadvertently released. Ground- disturbing activities during project construction could disperse contaminated soil.
Freeport Regional Water Authority and Bureau of Reclamation	Freeport Regional Water Project	Project was completed late 2010	Project includes an intake/pumping plant near Freeport on the Sacramento River and a conveyance structure to transport water through Sacramento County to the Folsom South Canal	Construction workers and members of the public could be exposed to existing soil contamination during ground- disturbing activities such as excavation and grading. Because groundwater also could be contaminated in these areas, workers and residents could be exposed to contaminated groundwater during trench and tunnel dewatering. Potentially toxic substances such as fuels, oils, and lubricants would be used during project construction. Accidental releases of these substances could contaminate soils and degrade the quality of surface water and groundwater, resulting in a public safety hazard.
Bureau of Reclamation	Delta-Mendota Canal/ California Aqueduct Intertie	Completed in 2012	The purpose of the intertie is to better coordinate water delivery operations between the California Aqueduct (state) and the Delta- Mendota Canal (federal) and to provide better pumping capacity for the Jones Pumping Plant. New project facilities include a pipeline and pumping plant	Fuel, oils, grease, solvents and other petroleum-based products could have been accidentally released and contaminate soils and degrade surface water and groundwater quality. Accidental releases could have also pose risks to worker safety by exposing workers to hazardous materials. Additionally, work under the California-Oregon Transmission Project has the potential to induce currents and static charges. Construction activities could cause electric arcs that could electrocute workers and bystanders, cause fires, and ground out the circuit. This could lead to a temporary collapse of the electric grid in the western region. If this were to happen, death and injury could result both

Agency	Program/ Project	Status	Description of Program/Project	Effects related to Hazards and Hazardous Materials
California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Bureau of Reclamation, California Department of Water Resources, Suisun Resource Conservation District	Suisun Marsh Habitat Management, Preservation, and Restoration Plan (SMP)	Final EIS/EIR 2011	The SMP is intended to balance the benefits of tidal wetland restoration with other habitat uses in the Marsh by evaluating alternatives that provide a politically acceptable change in Marsh-wide land uses, such as salt marsh harvest mouse habitat, managed wetlands, public use, and upland habitat.	at the project site and throughout the area of power outage.  Fuel and lubricant fluids associated with construction equipment could expose construction workers and the environment to hazardous materials if materials are improperly handled. Additionally, the project area has a history of agricultural use and may have areas of previously unknown contamination related to the use or storage of agricultural compounds. Project construction or maintenance activities thus could encounter unknown contamination.
Department of Water Resources	North Bay Aqueduct Alternate Intake	Notice of Preparation issued on December 2, 2009. CEQA documentation under preparation.	Plan to construct and operate an alternative intake on the Sacramento River, generally upstream of the Sacramento Regional Wastewater Treatment Plant, and connect it to the existing North Bay Aqueduct system by a new pipeline. The proposed alternative intake would be operated in conjunction with the existing North Bay Aqueduct intake at Barker Slough.	Hazardous materials used during project construction could be inadvertently released. Ground-disturbing activities during project construction could disperse contaminated soil and/or sediment.
Delta Conservancy	California EcoRestore	Initiated in 2015	This program will accelerate and implement a suite of Delta restoration actions for up to 30,000 acres of fish and wildlife habitat by 2020.	Potential for short-term hazards associated with constructing water supply infrastructure and restoration action.
Bureau of Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Services, Department of Water Resources,	San Joaquin River Restoration Program	Final EIS/EIR and Record of Decision completed in 2011.	Program that aims at restoring flows to the San Joaquin River from Friant Dam to the confluence of Merced River.	In addition to typical construction-related hazards such as accidental spills of hazardous materials, the EIS/EIS indicated that there would be a potentially significant hazard associated with disrupting active,

Agency	Program/ Project	Status	Description of Program/Project	Effects related to Hazards and Hazardous Materials
and Department of Fish and Wildlife				idle, or abandoned wells in the restoration area.
California High- Speed Rail Authority and Federal Railroad Administration	Altamont Corridor Rail Project	Preliminary Alternatives Analysis issued in February 2011.	The project would incrementally upgrade the Altamont Commuter Express System.	The construction of this project would involve the use, transport, and disposal of construction- related hazardous materials and potentially hazardous waste. Accordingly, accidental release of hazardous materials could occur. The project could occur in areas of known or unknown contamination, the disturbance of which could result in hazards to the public and the environment.
California High- Speed Rail Authority and Federal Railroad Administration	California High- Speed Rail System Fresno to Merced Section	Final EIR/EIS certified on May 3, 2012.	The project would construct a new rail corridor between Merced and Fresno.	The construction of this project would involve the use, transport, and disposal of construction- related hazardous materials and potentially hazardous waste. Accordingly, accidental release of hazardous materials could occur. The project could occur in areas of known or unknown contamination, the disturbance of which could result in hazards to the public and the environment.

1

2 This analysis first examines whether the combined effects of the action alternatives and other  
3 projects would be cumulatively significant. If so, the action alternatives are analyzed to assess  
4 whether the incremental contribution of an action alternative would be cumulatively considerable  
5 in and of itself. Individual impacts that may be less than significant in isolation may contribute to a  
6 considerable impact in the context of other projects; on the other hand, the incremental contribution  
7 of an action alternative to a cumulatively considerable impact of multiple projects may not itself be  
8 cumulatively considerable. Appendix 3D, *Defining Existing Conditions, No Action Alternative, No*  
9 *Project Alternative, and Cumulative Impact Conditions*, further explains criteria for cumulative impact  
10 analysis.

11 The potential for cumulatively considerable impacts related to hazards and hazardous materials in  
12 the study area is described below for implementation of the water conveyance facilities and CM2–  
13 CM11, CM13, CM14, CM16, CM18, and CM19 or Environmental Commitments 3, 4, 6–11, and 16. As  
14 described in Section 24.3, *Effects and Mitigation Approaches*, four proposed conservation measures  
15 related to reducing other stressors (listed below and described in detail in Chapter 3, *Description of*  
16 *Alternatives*), are not anticipated to result in any meaningful effects associated with hazards and  
17 hazardous materials in the study area. The actions implemented under these conservation measures  
18 do not entail physical activities that are likely to release hazardous materials to the environment,  
19 nor would they be expected to result in any direct or indirect, permanent or substantial impacts  
20 creating hazards to the public or environment. As such, these measures are not be addressed further  
21 in this cumulative impact analysis.

- 22 • CM12 or Environmental Commitment 12—Methylmercury Management

- 1 • CM15 or Environmental Commitment 15—Localized Reduction of Predatory Fishes
- 2 • Illegal Harvest Reduction (CM17)
- 3 • Recreational Users Invasive Species Program (CM20)
- 4 • Nonproject Diversion (CM21)

### 5 **24.3.5.1 Cumulative Effects of the No Action Alternative**

6 **NEPA Effects:** The cumulative effect of the No Action Alternative with regards to hazards and  
 7 hazardous materials would result from any projects that are planned or currently under way that  
 8 entail construction and operation and maintenance activities. These activities could result in the  
 9 rerelease of existing contaminants (e.g., from past industrial and agricultural practices) in soil and  
 10 groundwater; the release of hazardous materials from disturbance of regional fuel pipelines; the  
 11 accidental release of hazardous materials directly related to construction or  
 12 operations/maintenance; increase the potential for wildland fire hazards; and/or interfere with air  
 13 traffic safety, which could potentially result in cumulative effects on the public and environment.

14 Each project implemented under the No Action Alternative would require its own separate  
 15 environmental compliance process. Compliance with applicable laws pertaining to hazards and  
 16 hazardous materials, combined with the implementation of project-specific environmental  
 17 commitments and mitigation measures, would minimize the potential cumulative impacts of the No  
 18 Action Alternative related to hazards and hazardous materials. Therefore, there would be no  
 19 cumulative adverse effect under this alternative absent a catastrophic event related to climate  
 20 change or a seismic event.

21 The Delta and vicinity are within a highly active seismic area, with a generally high potential for  
 22 major future earthquake events along nearby and/or regional faults, and with the probability for  
 23 such events increasing over time. Based on the location, extent and non-engineered nature of many  
 24 existing levee structures in the Delta area, the potential for significant damage to, or failure of, these  
 25 structures during a major local seismic event is generally moderate to high. In the instance of a large  
 26 seismic event, levees constructed on liquefiable foundations are expected to experience large  
 27 deformations (in excess of 10 feet) under a moderate to large earthquake in the region. See  
 28 Appendix 3E, *Potential Seismic and Climate Change Risks to SWP/CVP Water Supplies*, for more  
 29 detailed discussion. To reclaim land or rebuild levees after a catastrophic event due to climate  
 30 change or a seismic event would potentially create a substantial hazard to the public or the  
 31 environment through the release of hazardous materials or by other means during construction. In  
 32 the instance of levee failure causing flooding, inundation could result in the release of a range of  
 33 hazardous materials including, but not limited to, fuel, chemicals, fertilizers, and pesticides. A large  
 34 scale seismic event could also rupture gas and oil pipelines resulting in exposure to hazardous  
 35 materials. Thus, there would be a potential for adverse effects on the environment and public in the  
 36 case of a catastrophic event due to climate change or a seismic event. While similar risks would  
 37 occur under implementation of the action alternatives, these risks may be reduced by project-  
 38 related levee improvements along with those projects identified in Table 24-7. Therefore, there  
 39 would be no cumulative adverse effect.

40 **CEQA Conclusion:** Implementation of programs, policies, and projects under the No Action  
 41 Alternative in the study area would have the potential for cumulative significant impacts on the  
 42 public or the environment related to hazards and/or hazardous materials (e.g., through the  
 43 inadvertent release of fuels or lubricants during construction). However, these impacts would be

1 smaller in scale and more confined in geographic scope relative to the action alternatives. Projects  
 2 implemented under the No Action Alternative would require their own separate environmental  
 3 compliance processes; would be required to adhere to applicable federal, state, and local  
 4 regulations; and would incorporate applicable BMPs, environmental commitments, and/or  
 5 mitigation intended to avoid, prevent, or minimize hazardous spills and construction-related  
 6 hazards and/or mitigate for such occurrences, which would help ensure that these types of impacts  
 7 are not cumulatively significant.

### 8 **24.3.5.2 Concurrent Project Effects**

9 Construction, operation, and maintenance of the water conveyance facilities, and CM2–CM11, CM13,  
 10 CM14, CM16, CM18 and CM19 under all action alternatives except Alternatives 4A, 2D, and 5A have  
 11 the potential to result in direct impacts on construction personnel, the public, and/or the  
 12 environment due to a variety of hazardous physical or chemical conditions. Such conditions may  
 13 arise as a result of the intensity and duration of construction activities at the north Delta intakes,  
 14 forebays, conveyance pipelines, and tunnels, and ground disturbing activities associated with  
 15 habitat restoration and enhancement, and the hazardous materials (e.g., fuels, oils, solvents) that  
 16 would be needed in these areas during construction. Potential hazards include the routine use of  
 17 hazardous materials; the inadvertent release of existing contaminants in soil and groundwater, or  
 18 hazardous materials in existing infrastructure to be removed; and disturbance of electrical  
 19 transmission lines.

20 Under Alternatives 4A, 2D, and 5A, relative to the other action alternatives, the magnitude of these  
 21 effects would likely be smaller given that restoration and enhancement activities would be limited  
 22 relative to the other action alternatives. Certain potential construction-related hazards would be  
 23 related only to implementation of the water conveyance facility (e.g., introducing air safety hazards  
 24 during construction). Construction activities for the water conveyance facilities and habitat  
 25 restoration and enhancement Environmental Commitments under Alternatives 4A, 2D, 5A could  
 26 overlap in time, with construction of the water conveyance facility concluding after approximately  
 27 14 years. In addition, in the long term, operation of these conservation measures, or Environmental  
 28 Commitments, and the water conveyance facility would occur simultaneously and, in some cases, in  
 29 close proximity. Accordingly, the combined effect/impact of constructing the water conveyance  
 30 facilities with implementing restoration and enhancement conservation measures, or  
 31 Environmental Commitments, could result in an increased impact on the public and environment  
 32 related to hazards and hazardous materials similar to what has been identified for impacts from  
 33 construction of the water conveyance facilities, but new impacts would not be expected to occur.  
 34 Implementing Mitigation Measures HAZ-1a, HAZ-1b, HAZ-6, HAZ-8, UT-6a, UT-6c, and TRANS-1a  
 35 identified for conveyance facility impacts would reduce the severity of these impacts.

### 36 **24.3.5.3 Cumulative Effects of the Action Alternatives**

#### 37 **Impact HAZ-9: Create Cumulative Hazards to the Public or the Environment through the** 38 **Release of Hazardous Materials or by Other Means as a Result of Constructing the Water** 39 **Conveyance Facilities**

40 **NEPA Effects:** Construction of the water conveyance facilities under each action alternative, in  
 41 combination with other related past, present, and reasonably foreseeable probable future  
 42 construction projects in the study area (as presented in Table 24-7 and Appendix 3D, *Defining*  
 43 *Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*),

1 could contribute to potential public and environmental hazards. The potential construction-related  
2 effects of the action alternatives pertain to the creation of hazards through the release of hazardous  
3 materials (e.g., inadvertent spills and disrupting existing contaminants in soils and existing  
4 structures) or by other means (e.g., natural gas accumulation in tunnels, disturbance of energized  
5 transmission lines, interference with air traffic safety). It is reasonable to assume that other projects  
6 would involve the risk of similar hazards, given that the majority of these types of hazards (e.g.,  
7 spills, potential for interference with air traffic for construction near an airport) are not uncommon  
8 for construction projects. The combined effects of any of the action alternatives with other projects  
9 related to the potential for creation of cumulative hazards would be cumulatively adverse. However,  
10 like the proposed project, each cumulative project would require an evaluation of potential hazards  
11 associated with its implementation and, as necessary, mitigation to avoid or minimize these hazards.  
12 Additionally, it is the responsibility of the projects' proponents to comply with applicable laws  
13 regarding hazardous materials and other hazards.

14 Due to the large geographic scale and extended time required to construct the water conveyance  
15 facilities, any of the action alternatives would make a cumulatively considerable contribution to  
16 adverse effects. However, implementation of environmental commitments (e.g., SWPPPs, HMMPs,  
17 SPCCPs, SAPs, and others as described above and in Appendix 3B, *Environmental Commitments*,  
18 *AMMs*, and *CMs*) and Mitigation Measures HAZ-1a, HAZ-1b, HAZ-6, HAZ-8, UT-6a, UT-6c, and TRANS-  
19 1a would render the contribution of any of the action alternatives less than cumulatively  
20 considerable. Accordingly, compliance with applicable laws pertaining to hazards and hazardous  
21 materials, combined with the implementation of project-specific environmental commitments and  
22 mitigation measures, would minimize cumulative impacts of the action alternatives and other  
23 projects related to hazards. Therefore, there would be no cumulative adverse effect.

24 **CEQA Conclusion:** The potential construction-related effects of each of the action alternatives  
25 pertain to the creation of hazards through the release of hazardous materials (e.g., inadvertent spills,  
26 disrupting existing contaminants in soils) or by other means (e.g., natural gas accumulation in  
27 tunnels, disturbance of energized transmission lines, and interference with air traffic safety).  
28 Construction of the water conveyance facilities in combination with related past, present, and  
29 reasonably foreseeable probable future construction projects considered in this cumulative analysis  
30 (as presented in Table 24-7 and Appendix 3D, *Defining Existing Conditions, No Action Alternative, No*  
31 *Project Alternative, and Cumulative Impact Conditions*, Attachment 3D-A) could result in a  
32 cumulatively significant impact related to hazards and hazardous materials. The incremental  
33 hazards and hazardous material impact contribution from any of the action alternatives would be  
34 cumulatively considerable, but with the implementation of Mitigation Measures HAZ-1a, HAZ-1b,  
35 HAZ-6 UT-6a, UT-6c, TRANS-1a, and the applicable environmental commitments discussed  
36 previously and in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, cumulative impacts of  
37 the action alternatives would be reduced to a less-than-significant level.

38 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
39 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
40 **Construction Footprint, and Remediate and/or Contain Contamination**

41 Please see Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative 1A.

1       **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 2       **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 3       **Dispose of Them in Accordance with Applicable Regulations**

4       Please see Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative 1A.

5       **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
 6       **and/or Disposal**

7       Please see Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative 1A.

8       **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

9       Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 10       Chapter 20, *Public Services and Utilities*.

11       **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 12       **Minimizes Any Effect on Worker and Public Health and Safety**

13       Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 14       Chapter 20, *Public Services and Utilities*.

15       **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 16       **Plan**

17       Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
 18       1A in Chapter 19, *Transportation*.

19       **Impact HAZ-10: Create Cumulative Hazards to the Public or the Environment through the**  
 20       **Release of Hazardous Materials or by Other Means as a Result of Operating and Maintaining**  
 21       **the Water Conveyance Facilities**

22       **NEPA Effects:** Operation and maintenance of the water conveyance facilities under the action  
 23       alternatives, in combination with other related past, present, and reasonably foreseeable probable  
 24       future projects in the study area (as presented in Table 24-7 and Appendix 3D, *Defining Existing*  
 25       *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*), could  
 26       contribute to potential public and environmental hazards. As previously described, under all of the  
 27       action alternatives, the transport, storage, and use of chemicals or hazardous materials may be  
 28       required during long-term operation and maintenance of the water conveyance facilities.  
 29       Additionally, facility equipment maintenance would be required for the intake pumping plants;  
 30       sedimentation basins and solids lagoons; the intermediate forebay and pumping plant; and operable  
 31       barrier, Byron Tract Forebay, combined pumping plants, and the expanded Clifton Court Forebay,  
 32       where present. For example, under alternatives with five intakes, maintenance of solids lagoons  
 33       would create an anticipated 18,000 cubic yards of dry sediment/solids annually, a potential source  
 34       of contaminants. Alternative 9 would require periodic dredging activities associated with  
 35       maintenance of pumping plants and operable barriers, and Alternatives 4, 4A, 2D, and 5A would  
 36       require periodic dredging of an expanded Clifton Court Forebay. Some of the materials used in  
 37       routine maintenance for all action alternatives may include hydraulic oil for lubricating machinery,  
 38       fuel, batteries for vehicles and equipment, nitrogen, carbon dioxide or clear agent fire suppression,  
 39       paints, cleaning solvents and chemicals, pesticides and herbicides for grounds maintenance. Some of

1 these materials, bulk fuel and lubricants for example, would likely be stored in the maintenance  
2 facilities. Accidental release of hazardous materials during routine operation and maintenance of the  
3 water conveyance facilities could contaminate soils, groundwater, or surface water and result in  
4 adverse effects on the environment and public.

5 It is reasonable to assume that many other past, present, and reasonably foreseeable projects in the  
6 study area (e.g., California Aquatic Invasive Species Draft Rapid Response Plan; the Davis-Woodland  
7 Water Supply Project) would involve the risk of similar hazards, given that the majority of these  
8 types of hazards (e.g., spills, periodic dredging) are not uncommon for operating and maintaining  
9 water conveyance facilities.

10 The combined effects of the any of the action alternatives with other projects related to the potential  
11 for creation of cumulative hazards during operation and maintenance would be cumulatively  
12 adverse. Due to the large geographic scale of the water conveyance facilities, the contribution of any  
13 of the action alternatives to the adverse effects would be cumulatively considerable. However,  
14 implementation of Mitigation Measure HAZ-6 and applicable environmental commitments (as  
15 described in Impact HAZ-6 under Alternative 1A, and in Appendix 3B, *Environmental Commitments*,  
16 *AMMs*, and *CMs*), and adherence to all applicable laws, would reduce the contribution of the  
17 proposed project to less than cumulatively considerable. Accordingly, compliance with applicable  
18 laws pertaining to hazards and hazardous materials, combined with the implementation of project-  
19 specific environmental action alternatives and other projects related to hazards. Therefore, there  
20 would be no cumulative adverse effect.

21 **CEQA Conclusion:** The accidental release of hazardous materials to the environment during  
22 operation and maintenance of the water conveyance facilities under all action alternatives could  
23 result in cumulative significant impacts on the public and the environment. The incremental  
24 contribution to hazards and hazardous material impact from any of the action alternatives would be  
25 cumulatively considerable, and therefore significant. However, the severity of these impacts would  
26 be reduced with the implementation of Mitigation Measure HAZ-6 and applicable environmental  
27 commitments (as described in Impact HAZ-6 under Alternative 1A, and in Appendix 3B,  
28 *Environmental Commitments*, *AMMs*, and *CMs*, respectively) and adherence to all applicable laws.  
29 Accordingly, cumulative impacts of the proposed project would be reduced to a less-than-significant  
30 level.

31 **Mitigation Measure HAZ-6: Test Dewatered Solids from Solids Lagoons Prior to Reuse**  
32 **and/or Disposal**

33 Please see Mitigation Measure HAZ-6 under Impact HAZ-6 in the discussion of Alternative 1A.

1 **Impact HAZ-11: Create a Cumulative Hazard to the Public or the Environment through the**  
 2 **Release of Hazardous Materials or by Other Means as a Result of Implementing CM2–CM11,**  
 3 **CM13, CM14, CM16, CM18, and CM19 or Environmental Commitments 3, 4, 6–11, and 16**

4 **NEPA Effects:** Construction, operation and maintenance of the proposed conservation measures  
 5 CM2–CM11, CM13, CM14, CM16, CM18, and CM19 as part of the BDCP alternatives, or  
 6 Environmental Commitments 3, 4, 6–11 and 16, related to Alternatives 4A, 2D and 5A, could have  
 7 effects related to hazardous materials (e.g., accidental release of fuels) and potential hazards similar  
 8 to those discussed for construction, operation, and maintenance of proposed water conveyance  
 9 facilities. As previously described, implementation of the conservation measures would involve  
 10 extensive use of heavy equipment during construction, and/or the use of chemicals during  
 11 operations and maintenance (e.g., herbicides for nonnative vegetation control), which could result in  
 12 the unintentional release of hazardous substances and could expose construction workers or the  
 13 public to hazards. There is also potential for implementation of conservation measures or  
 14 Environmental Commitments that create or improve wildlife habitat (i.e., CM2–CM11, or  
 15 Environmental Commitments 3, 4, and 6–11) to create hazards to air and public safety through  
 16 increased bird-aircraft strikes. The following airports, because they are in relatively close proximity  
 17 (within 2 miles) to the ROAs and/or conservation zones could potentially be affected: Travis Air  
 18 Force Base; Rio Vista Municipal Airport; Funny Farm Airport; Sacramento International Airport, and  
 19 Byron Airport. Mitigation Measure HAZ-8 is available to reduce this impact, although it would  
 20 remain significant and unavoidable. However, relative to the construction of the water conveyance  
 21 facility, the potential effects of conservation measures and the Environmental Commitments would  
 22 be dispersed over a larger geographic area and would generally involve substantially fewer  
 23 construction and operation effects than those associated with built facilities.

24 It is reasonable to assume that other past, present and reasonably foreseeable future projects,  
 25 including habitat restoration and enhancement projects (e.g., the Dutch Slough Tidal Marsh  
 26 Restoration Project, and the San Joaquin River Restoration Project), as identified in Table 24-7 and  
 27 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
 28 *Cumulative Impact Conditions*, would have similar, potentially hazardous effects. Combined effects of  
 29 the action alternatives and other projects would be cumulatively adverse. Due to the large  
 30 geographic scale and range of hazard risks involved in the conservation measures and  
 31 Environmental Commitments, the incremental contribution of implementing these to the cumulative  
 32 adverse effects of other projects would be cumulatively considerable and, as such, this would be an  
 33 adverse cumulative effect.

34 However, the proposed action alternatives incorporate environmental commitments and Mitigation  
 35 Measures HAZ-1a, HAZ-1b, HAZ-8, UT-6a, UT-6c, and TRANS-1a, as described under Impact HAZ-7  
 36 for Alternative 1A and in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, that would  
 37 reduce the action alternatives' incremental contribution to adverse cumulative effects in the study  
 38 area. Similarly, it is reasonable to assume that BMPs like the ones described previously (e.g.,  
 39 SWPPPs, SPCCPs, SAPs, and HMMPs) to minimize, avoid, and reduce effects related to hazards and  
 40 hazardous materials would be incorporated into other projects within the study area, thereby  
 41 further reducing the potential for cumulative effects related to hazards and hazardous materials in  
 42 the study area. Therefore, there would be no cumulative adverse effect.

43 **CEQA Conclusion:** The potential for cumulative impacts related to the release and exposure of  
 44 workers and the public to hazardous substances or conditions during construction, operation, and  
 45 maintenance of CM2–CM11, CM13, CM14, CM16, CM18, and CM19, or Environmental Commitments

1 3, 4, 6–11, and 16 is considered cumulatively significant. Implementation of the conservation  
 2 measures and Environmental Commitments would involve extensive use of heavy equipment  
 3 and/or the use of chemicals during operations and maintenance (e.g., herbicides for nonnative  
 4 vegetation control) that could unintentionally result in the release of hazardous substances or that  
 5 could expose construction workers or members of the public to hazards. Expanded or improved  
 6 wildlife habitat could increase the risk of bird-aircraft strikes, a hazard to air and public safety. The  
 7 action alternatives' contribution to this cumulative impact would be cumulatively considerable.  
 8 However, the action alternatives have incorporated environmental commitments and Mitigation  
 9 Measures HAZ-1a, HAZ-1b, HAZ-8, UT-6a, UT-6c, and TRANS-1a would be implemented, which  
 10 would reduce the incremental contribution of the any of the action alternatives to the cumulative  
 11 hazard-related impacts in the study area to a less-than-significant level.

12 **Mitigation Measure HAZ-1a: Perform Preconstruction Surveys, Including Soil and**  
 13 **Groundwater Testing, at Known or Suspected Contaminated Areas within the**  
 14 **Construction Footprint, and Remediate and/or Contain Contamination**

15 Please refer to Mitigation Measure HAZ-1a under Impact HAZ-1 in the discussion of Alternative  
 16 1A.

17 **Mitigation Measure HAZ-1b: Perform Pre-Demolition Surveys for Structures to Be**  
 18 **Demolished within the Construction Footprint, Characterize Hazardous Materials and**  
 19 **Dispose of Them in Accordance with Applicable Regulations**

20 Please refer to Mitigation Measure HAZ-1b under Impact HAZ-1 in the discussion of Alternative  
 21 1A.

22 **Mitigation Measure HAZ-8: Consult with Individual Airports and USFWS, and Relevant**  
 23 **Regulatory Agencies**

24 Please see Mitigation Measure HAZ-8 under Impact HAZ-8 in the discussion of Alternative 1A.

25 **Mitigation Measure UT-6a: Verify Locations of Utility Infrastructure**

26 Please see Mitigation Measure UT-6a under Impact UT-6 in the discussion of Alternative 1A in  
 27 Chapter 20, *Public Services and Utilities*.

28 **Mitigation Measure UT-6c: Relocate Utility Infrastructure in a Way That Avoids or**  
 29 **Minimizes Any Effect on Worker and Public Health and Safety**

30 Please see Mitigation Measure UT-6c under Impact UT-6 in the discussion of Alternative 1A in  
 31 Chapter 20, *Public Services and Utilities*.

32 **Mitigation Measure TRANS-1a: Implement Site-Specific Construction Traffic Management**  
 33 **Plan**

34 Please see Mitigation Measure TRANS-1a under Impact TRANS-1 in the discussion of Alternative  
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