4.11 HAZARDS AND HAZARDOUS MATERIALS

This section addresses hazards to human health and the environment from the use of hazardous materials and the potential for accidental spills of such materials during construction activities, accidental rupture of pipelines, proximity to known hazardous materials sites on the Cortese List, wildfires, and transmission of vector-borne diseases.

4.11.1 REGULATORY SETTING

FEDERAL

Hazardous Materials Handling

At the Federal level, the principal agency regulating the generation, transport, and disposal of hazardous substances is the U.S. Environmental Protection Agency (EPA), under the authority of the Resource Conservation and Recovery Act (RCRA). The RCRA established an all-encompassing Federal regulatory program for hazardous substances that is administered by EPA. Under the RCRA, EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. The RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments of 1984, which specifically prohibits the use of certain techniques for the disposal of various hazardous substances. The Federal Emergency Planning and Community Right to Know Act of 1986 imposes hazardous materials planning requirements to help protect local communities in the event of accidental release. These regulations apply to hazardous materials handling that would occur during project-related construction activities, for the protection of human health and the environment.

Worker Safety Requirements

The U.S. Department of Labor Occupational Safety & Health Administration (OSHA) is responsible at the Federal level for ensuring worker safety. OSHA sets Federal standards for implementation of workplace training, exposure limits, and safety procedures for the handling of hazardous substances (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program. These regulations apply to the protection of human health during project-related construction activities.

Superfund Amendments and Reauthorization Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) created the Superfund hazardous substance cleanup program (Public Law [PL] 96-510, enacted December 11, 1980). It was enlarged and reauthorized by the Superfund Amendments and Reauthorization Act of 1986 (SARA, PL 99-499). As part of CERCLA and SARA, EPA compiles a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories, known as the National Priorities List. These locations are commonly referred to as “Superfund sites.” CERCLA also entailed the creation of a trust fund and to provide broad Federal authority for releases or threatened release of hazardous substance that could endanger public health or the environment. There is a contaminated groundwater plume emanating from a Superfund site approximately 1.65 miles from project-related improvement areas along Arcade Creek.
STATE

Hazardous Materials Handling

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety. The California Environmental Protection Agency (Cal-EPA) and the Office of Emergency Services (OES) establish rules governing the use of hazardous substances in California. Within Cal-EPA, the California Department of Toxic Substance Control (DTSC) has primary responsibility, with delegation of enforcement to local jurisdictions, for regulating the generation, transport, and disposal of hazardous substances under the authority of the Hazardous Waste Control Law (HWCL). Regulations implementing the HWCL list hazardous chemicals and common substances that may be hazardous; establish criteria for identifying, packaging, and labeling hazardous substances; prescribe management of hazardous substances; establish permit requirements for hazardous substances treatment, storage, disposal, and transportation; and identify hazardous substances prohibited from landfills. These regulations apply to the protection of human health and the environment during project-related construction activities.

Worker Safety Requirements

The California Occupational Safety and Health Administration (Cal-OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within California. Cal-OSHA regulations pertaining to the use of hazardous materials at workplaces, as detailed in California Code of Regulations (CCR) Title 8, include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal-OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets be available to employees and that employee information and training programs be documented. These regulations apply to the protection of human health during project-related construction activities.

Hazardous Materials Transport

State agencies with primary responsibility for enforcing Federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. These regulations apply to the transport of hazardous materials that would occur during project-related construction activities.

California Government Code Section 65962.5 (Cortese List)

The provisions of California Government Code Section 65962.5 are commonly referred to as the “Cortese List” (after the legislator who authored the legislation that enacted it). The Cortese List is a planning document used by the State and local agencies to comply with CEQA requirements in providing information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires Cal-EPA to develop an updated Cortese List annually, at minimum. DTSC and the State Water Resources Control Board (SWRCB) are responsible for a portion of the information contained in the Cortese List. Other California State and local government agencies are required to provide additional hazardous material release information for the Cortese
List. CEQA requires an evaluation as to whether or not a project would be located on a hazardous materials site that is included on the Cortese List; the results of Cortese List database searches are discussed below in the “Environmental Setting” section.

Hazards Materials in the Vicinity of School Sites

Sensitive receptors are people that are considered to have a substantially increased sensitivity or rate of exposure to contaminants. Because of this increased sensitivity, special consideration must be given to projects located near sensitive receptors. CEQA specifically establishes that special consideration must be given to projects located near schools (i.e., within 0.25 mile) when considering hazards and hazardous materials (California Public Resources Code [PRC] Section 21151.4). This consideration allows for careful examination and disclosure of potential health effects on children associated with exposure to hazardous materials, wastes, and substances. This applies to project construction activities within 0.25 mile of school sites.

Fire Hazard Severity Zones

California PRC Sections 4201-4204 and Government Code Sections 51175-51189 require identification of fire hazard severity zones within the state of California. Fire hazard severity zones are measured qualitatively, based on: vegetation, topography, weather, crown fire potential (a fire’s tendency to burn upwards into trees and tall brush), and ember production and movement within the area of question. Fire prevention areas considered to be under State jurisdiction are referred to as “state responsibility areas.” In state responsibility areas, the California Department of Forestry and Fire Protection (CAL FIRE) is required to delineate three hazard ranges: moderate, high, and very high. CAL FIRE is also required to delineate “local responsibility areas,” which are under the jurisdiction of local entities (e.g., cities, counties); in local responsibility areas, only very high fire hazard severity zones are delineated. CEQA requires that environmental analyses consider the potential exposure of people and structures to wildland fire hazards. This applies to the proposed project, if very high fire hazard severity zones are delineated.

Airport Safety Hazards

Airport safety areas are established to minimize the number of people exposed to aircraft crash hazards, by placing restrictions on land uses in various safety areas. The Sacramento Area Council of Governments (SACOG) has prepared airport land use compatibility plans for three of the airports in the project vicinity (Rio Linda Airport, Borges-Clarksburg Airport, and Sacramento Executive Airport). These plans designate three safety areas: the clear zone, the approach-departure zone, and the overflight zone. The clear zone is near the end of the runway and is the most restrictive. The approach-departure zone is located under the takeoff and landing slopes and is less restrictive. The overflight zone is the area underneath the general aircraft traffic pattern; it commonly extends as a radius of approximately 5,000 feet from the runway and encompasses a circular area in all directions. The actual dimensions of these safety areas at each airport take into account Federal Aviation Administration (FAA) safety zone dimensions along with historical aircraft accident data. In addition, Part 77 of the Federal Aviation Regulations, “Objects Affecting Navigable Airspace,” regulates the height and placement of new structures within the three airport safety zones. Finally, airport land use plans generally recognize that certain safety hazards to aircraft and airport operations may occur where a land use would:

- attract large concentrations of birds within approach/climb out areas,
- produce smoke or flashing lights,
reflect light or generate electronic interference, or
use or store large quantities of flammable materials.

CEQA requires that environmental analyses consider the potential exposure of people, structures, and aircraft to safety hazards. This applies to the conversion of borrow sites and creation of habitat lands in the vicinity of public airports, where concentrations of birds may occur.

**REGIONAL AND LOCAL**

**Hazardous Material Storage, Handling, and Management**

The Sacramento County Environmental Management Department (EMD) is the lead local regulatory agency (i.e., Certified Unified Program Agency [CUPA]) and is responsible for a variety of tasks related to the storage, handling, and management of hazardous materials. The Sacramento County EMD has a 24-hour hazardous materials incident response team and responds to incidents involving chemical releases, as well as any other hazardous materials situations. Sacramento County EMD regulates storage and handling of hazardous materials that would be used during project-related construction activities.

**Sacramento County General Plan**

The following policies from the *Sacramento County General Plan of 2005-2030* Hazardous Materials Element regarding hazardous materials apply to the proposed project (Sacramento County 2011:4, 7–9).

- **Policy HM-4:** The handling, storage, and transport of hazardous materials shall be conducted in a manner so as not to compromise public health and safety standards. (Applies to project-related handling, storage, and transport of hazardous materials.)

- **Policy HM-8:** Continue the effort to prevent ground water and soil contamination. (Applies to project-related handling, storage, and transport of hazardous materials.)

- **Policy HM-9:** Continue the effort to prevent surface water contamination. (Applies to project-related handling, storage, and transport of hazardous materials during construction.)

- **Policy HM-10:** Reduce the occurrences of hazardous material accidents and the subsequent need for incident response by developing and implementing effective prevention strategies. (Applies to project-related handling, storage, and transport of hazardous materials during construction.)

- **Policy HM-11:** Protect residents and sensitive facilities from incidents which may occur during the transport of hazardous materials in the County. (Applies to project-related transport of hazardous materials during construction.)

**City of Sacramento 2030 General Plan**

The following policies from the *City of Sacramento 2030 General Plan* Public Health and Safety Element regarding hazards and hazardous materials apply to the proposed project (City of Sacramento 2009:2-285 and 2-286).
4.11.2 ENVIRONMENTAL SETTING

For purposes of this section, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. A “hazardous material” is defined in the Code of Federal Regulations (CFR) as “a substance or material that…is capable of posing an unreasonable risk to health, safety, and property when transported in commerce” (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

“Hazardous material” means any material that, because of its quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

“Hazardous wastes” are defined in California Health and Safety Code Section 25141(b) as wastes that:

… because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness, or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

A search was performed by AECOM of the GeoTracker database, which is a groundwater information management system that is maintained by SWRCB. Data relating to leaking underground storage tanks and other cleanup activities are part of the information that SWRCB is required to maintain under California PRC Section 65962.5 (i.e., the “Cortese List”). AECOM also performed a search of the Hazardous Waste and Substances Site List (i.e., the EnviroStor database), which is maintained by DTSC as part of the requirements of California PRC Section 65962.5. Finally, AECOM performed a search of the EPA’s Superfund Site database. The results of these records searches are presented below by geographic area.

NORTH SACRAMENTO STREAMS LEVEE IMPROVEMENTS

Hazardous Materials

Results of the GeoTracker and EnviroStor database searches indicate there are no open active case listings within the project footprint of the North Sacramento Streams Levee Improvements area, nor are there any open active case listings within 0.25 mile of the proposed borrow sites. However, there are two open active case listings

• PHS 3.1.1 Investigate Sites for Contamination. The City shall ensure buildings and sites are investigated for the presence of hazardous materials and/or waste contamination before development for which City discretionary approval is required. The City shall ensure appropriate measures are taken to protect the health and safety of all possible users and adjacent properties. (Applies to the evaluation of hazardous material sites in the project study area.)

• PHS 3.1.4 Transportation Routes. The City shall restrict transport of hazardous materials within Sacramento to designated routes. (Applies to the transportation of project-related hazardous materials.)
within 100 and 300 feet, respectively, of several of the levee improvement areas. A description of these sites is presented in Table 4.11-1.

Table 4.11-1. GeoTracker and EnviroStor 2014 Database Search Results for the North Sacramento Streams Levee Improvements Area

<table>
<thead>
<tr>
<th>Location</th>
<th>Site Name, Address, Description, Number</th>
<th>Contaminants</th>
<th>Media Affected</th>
<th>Status/Cleanup Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 feet south of ACS B and ACS C</td>
<td>Full Stop Minimart 3200 Rio Linda Boulevard Leaking underground storage tanks SWRCB: T0606701131</td>
<td>Total Petroleum Hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene, xylene (BTEX), and methyl tertiary butyl ether (MTBE)</td>
<td>Aquifer used for drinking water supply (direction of groundwater flow is to the southeast, away from Arcade Creek)</td>
<td>Remediation/soil vapor extraction, removal of liquid waste</td>
</tr>
<tr>
<td>300 feet north of ACN C, ACS C</td>
<td>Quik Stop 3296 Marysville Boulevard Leaking underground storage tank SWRCB: T0606701067</td>
<td>Petroleum</td>
<td>Aquifer used for drinking water supply</td>
<td>Site Assessment and remediation/soil removal, groundwater monitoring</td>
</tr>
</tbody>
</table>

Notes: SWRCB = State Water Resources Control Board

1 Includes permitted underground storage tanks that are within the actual project footprints. Only the open active listings within 0.25 mile of each reach are listed.

Sources: DTSC 2014, SWRCB 2014, Ramage Environmental 2011, data compiled by AECOM in 2014

A search of the EPA Region 9 Superfund Site database indicates there are five Superfund Sites in Sacramento County, one of which has been remediated and is operated as a public park (EPA 2014a). The closest open active site is located at McClellan Airfield (formerly McClellan Air Force Base), approximately 1.8 miles northeast of the improvement areas along the eastern reach of Arcade Creek. One of the contamination issues at the former Air Force Base is related to volatile organic compounds (VOCs) that migrated into the groundwater underneath and adjacent to the former Air Force Base property. Groundwater extraction and treatment systems have been operating since 2005 and will continue to operate for the foreseeable future. A groundwater treatment plant is located on the west side of the former Air Force Base property. Treated groundwater is discharged to Magpie Creek, which flows southwesterly into Natomas East Main Drainage Canal (NEMDC)/Steelhead Creek near the location of improvement area NEMDC/Steelhead Creek B. Because of the contamination issues, groundwater in the Arcade area is not used as a source of drinking water supply. (EPA 2014b.) Groundwater underneath the former Air Force Base flows in a southwesterly direction—towards Arcade Creek—but is located more than 100 feet below the ground surface. As of late 2009, the southernmost boundary of the contaminated groundwater plume was located just north of Nelson Street, which is approximately 1.65 miles northeast of improvement areas ANC C and ACS C. (Air Force Civil Engineering Center 2010.)

One of the proposed staging areas is located at 231 Lampasas Avenue, and a limited amount of project-related ground-disturbing activities may occur at this staging area. This location is the site of Pacific Gas and Electric Company’s (PG&E) North Sacramento Gas Underground Storage Facility. In August 2014, the California Public Utilities Commission (CPUC) approved PG&E’s advice letter regarding the potential for hazardous materials at this location. PG&E has indicated that historical operations may have resulted in a release of mercury and/or other hazardous substances prior to 1991. PG&E’s facility was constructed in 1951 to support the operations of its gas transmission and distributions systems and various associated facilities. Site facilities include an unmanned
building used to house gas valve instrumentation and controls. Some of the control instrumentation contained mercury, and PG&E is exploring the possibility of a historical release at this site. (CPUC 2014.)

Channel improvements and riparian plantings in Arcade Creek and areas of NEMDC/Steelhead Creek associated with the Conservation Strategy would entail ground-disturbing activities in these areas. As shown in Table 4.11-1, a leaking underground storage tank is located approximately 100 feet south of Arcade Creek in the North Sacramento Streams Levee Improvements area. This hazardous material spill has resulted in soil and groundwater contamination. The soil contamination has been remediated, and groundwater remediation and monitoring are ongoing. The direction of groundwater flow in this area is to the southeast, away from proposed Conservation Strategy activities in Arcade Creek.

The Conservation Strategy would also entail riparian plantings in various locations (see Chapter 3, “Project Description,” for a detailed discussion and an exhibit showing the locations of the planting areas). In the North Sacramento Streams Levee Improvements area, riparian plantings are proposed on approximately 7 acres of the Novak parcel (located northeast of the intersection of Garden Highway and Powerline Road) and on approximately 6 acres of the Riego North site (located on the east side of the Sacramento River near the intersection of Garden Highway and Riego Road). There are no open active hazardous material sites within 0.25 mile of either of these sites (SWRCB 2014).

In addition, natural gas pipelines owned by PG&E are located along the levees in the North Sacramento Streams Levee Improvements area. Encroachment removal would require either temporary removal or permanent relocation of these utilities. Health and safety hazards may occur if earthmoving activities disrupt pipelines.

Based on a review of the open active hazardous materials sites listed in the GeoTracker database (SWRCB 2014), removal of hazardous trees throughout the project study area would not occur within or immediately adjacent to any known hazardous materials site.

**Schools within 0.25 Mile of Work Areas**

The Fairbanks Elementary School, at 227 Fairbanks Avenue, is located approximately 500 feet north of Reach ACN A. The Martin Luther King Jr. Technology Academy, a middle school in the Twin Rivers Unified School District, is located approximately 150 feet south of Reach ACS B (at 3051 Fairfield Street).

**Airports and Airstrips**

As previously stated, McClellan Airfield is located approximately 1.8 miles northeast of the improvement areas along the eastern reach of Arcade Creek. The property is now operated by McClellan Jet Services as a public-use, uncontrolled airport. For the 12-month period ending in April 2013, the airfield experienced an operation rate of approximately 49 flights per day (or approximately 17,885 flights per year) (AirNav 2014a). There is one paved runway that is approximately 10,600 feet long and 200 feet wide. In addition to public aircraft uses, the U.S. Coast Guard operates its Coast Guard Air Station, Sacramento at McClellan, and CAL FIRE uses McClellan as a hub for its fleet of firefighting aircraft. The most recent land use compatibility plan for McClellan Airfield was prepared in 1987, when the property was an Air Force Base. Since the base closure and reuse for private flights, the land use compatibility plan is no longer applicable and Sacramento County has indicated that a new plan is in process. (Sacramento County 2014.)
Damage to aircraft caused by birds and other wildlife is termed a “strike” or “strike hazard.” The FAA is responsible for enforcing 14 CFR Part 139, which prescribes rules regarding operation of airports used by aircraft with seating capacity of more than 30 passengers. An ecological study must be prepared and submitted to FAA when multiple birds or other wildlife are struck by aircraft or ingested into aircraft engines, or when the number of birds or other wildlife present in an airport flight pattern is sufficient to result in such hazards. FAA determines whether a wildlife hazard management plan is needed. The FAA Advisory Circular *Hazardous Wildlife Attractants on or Near Airports* (2007) provides guidance on where to locate certain land uses that have the potential to attract hazardous wildlife to or near public-use airports. FAA recommends maintaining the following separations when siting water-related land uses that may attract hazardous wildlife (FAA 2007):

- 5,000 feet from airports serving piston-powered aircraft;
- 10,000 feet from airports serving turbine-powered aircraft; and
- 5 statute miles from airports where the wildlife attractant may cause hazardous wildlife movement into or across the approach or departure airspace.

Arcade Creek and NEMDC/Steelhead Creek provide habitat for resident and migratory waterfowl such as nesting mallards and wood ducks, as well as other bird species (see Section 4.6, “Biological Resources—Terrestrial,” for further discussion of bird species that are present or may be expected to occur in the project study area). The Rio Linda Airport is located approximately 870 feet northeast of Borrow Site 3 (riparian planting site Robla Creek A) and is approximately 3 miles north of the Arcade Creek improvement areas. During the 1-year period from July 2012–July 2013, the airport experienced an operation rate of approximately 82 flights per day (or approximately 29,930 flights per year) (AirNav 2014b). The airport is privately owned with a single paved runway that is approximately 2,720 feet long and 50 feet wide. Borrow Site 3 is located within the airport’s overflight zone, which generally coincides with the area overflown by aircraft during normal traffic pattern procedures. (SACOG 1992:4, 37.) There are 3 existing waterski lakes on the east side of the Rio Linda Airport runway, totaling approximately 30 acres. Dry Creek is located approximately 500 feet west of the airport runway, and Robla Creek is located approximately 450 feet southwest of the airport runway.

**Wildland Fire Hazards**

The proposed levee improvements and borrow areas are located within a generally developed and urbanized area. However, riparian vegetation, which is quite thick in certain areas (e.g., thickets of red sesbania [*Sesbania punicea*]) is present within and adjacent to the levees along Arcade Creek and NEMDC/Steelhead Creek, and along Dry Creek in the vicinity of Borrow Site 3. According to CAL FIRE, the North Sacramento Streams Levee Improvements area is within a local responsibility area, and is not within a very high fire hazard severity zone (CAL FIRE 2007, 2008).

**SACRAMENTO RIVER EAST LEVEE IMPROVEMENTS**

**Hazardous Materials**

In the Sacramento River East Levee Improvements area, results of the GeoTracker and EnviroStor database searches indicates there are four open active case listings in the vicinity of the levee, one within the footprint of the borrow site, one adjacent to vegetation management activities near Freeport, and two additional sites within 0.25 mile of several improvement areas. A description of these sites is presented in Table 4.11-2.
Table 4.11-2. GeoTracker and EnviroStor 2014 Database Search Results for the Sacramento River East Levee Improvements Area

<table>
<thead>
<tr>
<th>Reach or Borrow Site</th>
<th>Site Name, Address, Description, Number</th>
<th>Contaminants</th>
<th>Media Affected</th>
<th>Status/Cleanup Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Borrow Area</td>
<td>Biosolids/Solids Disposal Facility 8521 Laguna Station Road SWRCB: L10007002783</td>
<td>None specified</td>
<td>None specified</td>
<td>A groundwater monitoring well near Glacier Way and South Landfill Way was installed, but has since been abandoned in accordance with Sacramento County permits</td>
</tr>
<tr>
<td>Reach 2</td>
<td>PG&amp;E Former MGP 2000 Front Street Former manufactured gas plant SWRCB: SL205112999 DTSC: 34490048</td>
<td>Chromium, metals/heavy metals, petroleum/fuels/oils, polynuclear aromatic hydrocarbons</td>
<td>Water (agricultural supply-threatened; industrial supply-affected; municipal supply-affected)</td>
<td>Remediation/pump and treat groundwater; soil stabilization</td>
</tr>
<tr>
<td>Reaches 5 and 6</td>
<td>TOSCO Refining Co. 66 Broadway Former bulk fuel terminal SWRCB: SL372513</td>
<td>Petroleum: automotive gasolines and diesel fuels</td>
<td>Groundwater (other than drinking water)</td>
<td>Verification monitoring/soil vapor extraction; liquid waste removal; contaminated soil removal; monitoring wells</td>
</tr>
<tr>
<td></td>
<td>Chevron Sacramento Terminal 2420 Front Street Bulk fuel terminal with 13 above ground storage tanks containing jet fuel A, diesel, unleaded gasoline, and unleaded supreme gasoline. SWRCB: T0606700657</td>
<td>Gasoline</td>
<td>Groundwater (other than drinking water)</td>
<td>Verification monitoring/pump and treat groundwater; soil vapor extraction; removal of liquid waste; air sparging to remove vapors; monitoring wells</td>
</tr>
<tr>
<td></td>
<td>TOSCO-76 Broadway 12 above ground fuel storage tanks 76 Broadway SWRCB: SL0606742138</td>
<td>Petroleum: automotive gasolines and diesel fuels</td>
<td>Groundwater (other than drinking water), soil</td>
<td>Remediation/soil vapor extraction, water treatment, removal of liquid waste, monitoring wells</td>
</tr>
<tr>
<td></td>
<td>Setzer Forest Products and Sacramento Farmers Market 2570 Third Street SWRCB: T060678234 DTSC: 60000396</td>
<td>Diesel, gasoline, waste oil/motor/hydraulic/lubricating</td>
<td>Groundwater (other than drinking water), soil</td>
<td>Site assessment/7 acres of the 32-acre site have been investigated and do not require remediation. Investigation of remaining 25 acres is ongoing</td>
</tr>
<tr>
<td>1,300 feet north of</td>
<td>Cleaner’s Express at Riverlake Village 7600 Greenhaven Drive SWRCB: T10000003089</td>
<td>Tetrachloroethylene (PCE), trichloroethylene (TCE)</td>
<td>Soil, soil vapor</td>
<td>Although case is still listed in “open” status, cleanup actions have been completed as of August 2014 and case is scheduled to be closed</td>
</tr>
<tr>
<td>Reach 27</td>
<td>Delta Shores 8145 Freeport Boulevard SWRCB: T10000000566</td>
<td>Diesel fuel</td>
<td>Soil, potentially groundwater</td>
<td>Investigations are ongoing</td>
</tr>
</tbody>
</table>

Notes: DTSC = California Department of Toxic Substances Control; SWRCB = State Water Resources Control Board

Includes permitted underground storage tanks that are within the actual project footprints. Only the open active listings within 0.25 mile of each reach, on the east side of the Sacramento River, are listed.

Sources: DTSC 2014 and SWRCB 2014, data compiled by AECOM in 2014.
The Conservation Strategy would also entail riparian plantings in several locations along the Sacramento River East Levee. Based on a review of data contained in the GeoTracker database (SWRCB 2014) and listed in Table 4.11-2, riparian plantings along the Sacramento River East Levee would not occur within 0.25 mile of any known hazardous materials site.

Riparian plantings areas are also proposed on approximately 75 acres located north of the Stone Lakes National Wildlife Refuge. Based on a review of data contained in the GeoTracker database (SWRCB 2014), riparian plantings at these two locations listed above would not occur within 0.25 mile of any known hazardous materials site.

There are existing utilities that cross or are adjacent to the levee that would require removal. These utilities consist of petroleum and natural gas pipelines, and storm drainage and pump station discharge pipes. Several known pipeline locations have been identified at this time in the Sacramento River East Levee Improvements area, as follows:

- an active Kinder Morgan petroleum pipeline in Reach 6;
- an active Chevron petroleum pipeline in Reach 6;
- four additional petroleum pipelines that feed adjacent tank farms in Reach 6; and
- two PG&E natural gas mains that parallel the landside levee toe in portions of Reaches 3, 4, and 5.

Encroachment removal would require either temporary removal or permanent relocation of utilities. Health and safety hazards may occur if earthmoving activities disrupt pipelines.

Based on a review of the open active hazardous materials sites listed in the GeoTracker database (SWRCB 2014), removal of hazardous trees throughout the project study area would not occur within or immediately adjacent to any known hazardous materials site.

**Schools within 0.25 Mile of Work Areas**

The Leataata Floyd Elementary School and the adjacent Arthur J. Benjamin Health Professions High School, at 401 and 451 McClatchy Way, respectively, are located approximately 1,200 feet southeast of work that would be performed in Reach 7. The Genevieve Didion Elementary School, at 6490 Harmon Drive, is located approximately 1,200 feet southwest of Reach 17. The Brookfield School (serving grades K through 8) at 6115 Riverside Boulevard, near Reaches 14 and 15. In addition, the Merryhill Elementary School is located immediately adjacent to and south of one of the proposed staging areas on the landside of the levee, in the Pocket area.

**Airports and Airstrips**

The Sacramento Executive Airport is located approximately 1.3 miles east of Reach 14. The airport experienced an operation rate of approximately 252 flights per day (approximately 3,024 flights per year) for the 12-month period ending in October 2013. The airport is publicly owned (by the City of Sacramento) and has three paved runways (approximately 5,503 x 150 feet; 3,837 x 100 feet; and 3,505 x 150 feet) along with a helipad. (AirNav 2014c.) Reach 14 is not located within or adjacent to any of the airport safety zones. (SACOG 1999:39.)

The Borges-Clarksburg Airport is located approximately 1.2 miles west of the SRCSD borrow area and approximately 2.2 miles south of Reach 27. The Conservation Strategy includes a proposed 75-acre riparian
planting area north of the Stone Lakes National Wildlife Refuge, which is located approximately 1,500 east of the Borges-Clarksburg Airport, on the opposite side of the Sacramento River. The airport experienced an operation rate of approximately 3,000 flights in 2001 (GCR, Inc. 2014). The airport is privately operated and has one runway with a turf surface measuring approximately 2,360 feet long by 70 feet wide. The south borrow site is located just outside, and to the east of, the airport’s overflight zone. Reach 27 is not located within or adjacent to any of the airport safety zones. (SACOG 1994:3, 21.) The proposed riparian planting site does not include the creation of any additional wetted area.

Wildland Fire Hazards

The proposed levee improvements are located within a generally developed and urbanized area. However, riparian vegetation is present within the levees along the Sacramento River. Vegetation is also present on the north and east sides of the borrow site, in the vicinity of Laguna Creek. According to CAL FIRE, the Sacramento River East Levee Improvements area is within a local responsibility area, and is not within a very high fire hazard severity zone (CAL FIRE 2007, 2008).

American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal

Hazardous Materials

In two instances, encroachment removal activities could take place within or immediately adjacent to open active hazardous material sites listed in the GeoTracker database (SWRCB 2014) in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area:

► PG&E power plant at 240 Jibboom Street (just south of the confluence of the American and Sacramento Rivers), where a fuel oil spill was reported and cleaned up but monitoring of groundwater is ongoing; and

► Harbor Sand &Gravel at 200 28th Street (on the south side of the American River), where a fuel oil spill was reported and cleaned up but monitoring of groundwater is ongoing.

Riparian plantings are proposed on approximately 7 acres of the approximately 270-acre Woodlake site (located on the north side of the American River between State Route [SR] 160 and the Union Pacific Railroad tracks), based on a review of data contained in the GeoTracker database (SWRCB 2014), if riparian plantings were to occur in the northeast corner of the Woodlake site, such plantings would occur within 0.25 mile of the Kinder Morgan pipeline hazardous materials site, where a leak of petroleum hydrocarbons near a check valve bypass has resulted in soil and groundwater contamination. A soil vapor extraction system was placed into operation in January 2014 and that operation will continue into the foreseeable future. Assessment of the extent of groundwater contamination is ongoing; however, the depth to groundwater is approximately 49 feet below the ground surface, and the direction of groundwater flow is generally to the north-northwest (SWRCB 2014).

Habitat restoration is also proposed on approximately 7 acres at the Camp Pollack site, which is south of Site 18A, between SR 160 to the east and Northgate Boulevard to the north. Based on a review of data contained in the GeoTracker database (SWRCB 2014), the only known hazardous materials site is a leaking underground storage tank cleanup site at 1940 Railroad Drive, approximately 1,600 feet north of the Camp Pollack habitat mitigation site. This cleanup site is discussed below under the discussion regarding Site 18A.
A search of the GeoTracker database (SWRCB 2014) indicates there are no open, active hazardous materials sites within 0.25 mile of the Beach Lake Levee.

The Conservation Strategy would also entail riparian plantings on approximately 20 acres in the Upper Beach Lake Wildlife Area Bufferlands. Based on a review of data contained in the GeoTracker database (SWRCB 2014), riparian plantings at this location would not occur within 0.25 mile of any known hazardous materials site.

**Airports and Airstrips**

Areas along the American River, and on the south side of the Beach Lake Levee (adjacent to Morrison Creek), provide habitat for resident and migratory waterfowl such as nesting mallards and wood ducks, as well as other bird species (see Section 4.6, “Biological Resources–Terrestrial,” for further discussion of bird species that are present or may be expected to occur in the project study area). The Conservation Strategy includes a proposed 20-acre riparian planting area at the Upper Beach Lake Wildlife Area, which is located approximately 1 mile northeast of the Borges-Clarksburg Airport, on the opposite side of the Sacramento River. However, the proposed planting site does not include the creation of any additional wetted area.

**Wildland Fire Hazards**

The American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area contains stands of mixed vegetation that provide fuel for fire along the wildland/urban interface. Riparian vegetation is present along both sides of the American River, and adjacent to the south side of the Beach Lake Levee (along Morrison Creek). According to CAL FIRE, the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area is within a local responsibility area, and is not within a very high fire hazard severity zone (CAL FIRE 2007, 2008).

**NATOMAS EAST MAIN DRAINAGE CANAL/STEELHEAD CREEK CORRIDOR MANAGEMENT PLAN**

**Hazardous Materials**

Channel improvements and riparian plantings in Dry Creek, Robla Creek, and areas of NEMDC/Steelhead Creek associated with the NEMDC/Steelhead Creek Corridor Management Plan (CMP) would entail ground-disturbing activities in these areas. As shown in Table 4.11-1, a leaking underground storage tank is located approximately 100 feet south of Arcade Creek. This hazardous material spill has resulted in soil and groundwater contamination. The soil contamination has been remediated, and groundwater remediation and monitoring are ongoing. The direction of groundwater flow in this area is to the southeast, away from proposed NEMDC/Steelhead Creek CMP activities.

Habitat restoration is proposed for Site 18A (located on the east side of Northgate Boulevard, between Del Paso Boulevard and SR 160 on the south and the Arden-Garden Connector on the north). Based on a review of data contained in the GeoTracker database (SWRCB 2014), Site 18A is located approximately 600 feet west of a leaking underground storage tank cleanup site at 1940 Railroad Drive, where a gasoline leak resulted in soil and groundwater contamination. A soil vapor extraction and air sparging system was operational from 2006 to 2008, at which point it was destroyed by vandalism. Remediation of contaminated soil has been completed. An ozone injection system using six injection wells to be installed on the northeast side of the existing building is proposed for future treatment of petroleum hydrocarbons in groundwater. The direction of groundwater flow is to the northeast, away from Site 18A (SWRCB 2014).
Airports and Airstrips

Arcade, Dry, Robla, and NEMDC/Steelhead Creeks provide habitat for resident and migratory waterfowl such as nesting mallards and wood ducks, as well as other bird species (see Section 4.6, “Biological Resources–Terrestrial,” for further discussion of bird species that are present or may be expected to occur in the project study area). The NEMDC/Steelhead Creek CMP includes planting clusters of mixed riparian forest and scrub species in select locations distributed along approximately 1.7 miles of lower Dry Creek where there are gaps in the woodland canopy shading the stream; the Rio Linda Airport is located approximately 500 feet east of Dry Creek.

Vector-Borne Diseases

Some areas along Lower Dry Creek and NEMDC/Steelhead Creek contain standing water due to the proliferation of beaver dams. Standing water, particularly in aquatic habitat areas, serves as a mosquito-breeding ground. The mosquito populations in the Sacramento Valley are typically most abundant in the warmer months of early spring through mid-fall. The female mosquito needs blood to produce eggs. Hosts that can supply blood include reptiles, amphibians, mammals, birds, and humans. All mosquito species are potential vectors of organisms that can cause disease to pets, domestic animals, wildlife, or humans. The project study area is located within the SYMVCD. Mosquito-breeding problems are addressed by SYMVCD using IPM techniques such as surveillance, monitoring of mosquito-breeding sources, community outreach, public education, chemical and biological control methods, and the implementation of BMPs designed to reduce mosquito populations. SYMVCD has developed and adopted a BMP Manual that contains design and maintenance guidelines to reduce mosquito populations by various means such as reducing or eliminating breeding areas, increasing the efficacy of biological controls, increasing the efficacy of chemical controls, and improving access for control operations (SYMVCDD 2008).

4.11.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

METHODOLOGY

The assessment of impacts related to hazards and hazardous materials considered the locations, duration, and types of project-related activities in relation to known hazardous materials sites (derived from databases maintained by DTSC, SWRCB, and EPA); airport land use compatibility plans prepared by SACOG; school district location maps; and CAL FIRE data.

SIGNIFICANCE CRITERIA

The thresholds for determining the significance of impacts for this analysis are based on the environmental checklist in Appendix G of the State CEQA Guidelines, as amended. The proposed project would have a significant impact on hazards and hazardous materials if implementation of the proposed project would:

- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment or through the routine transport, use, or disposal of hazardous materials;

- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;

result in a safety hazard for people residing or working in a project area that is located within 2 miles of a public airport or public use airport;

impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or residences are intermixed with wildlands.

In addition to the significance thresholds above from the State CEQA Guidelines, the proposed project would also have a significant impact on hazards and hazardous materials if implementation of the proposed project would:

create a public health hazard from increased exposure to mosquito-borne diseases by substantially increasing the amount of mosquito habitat.

Issues Not Discussed Further in this EIR

Routine Transport, Use, or Disposal of Hazardous Materials—The proposed project would involve the incidental transport and use of common construction materials such as oils, lubricants, and gasoline, and the use of materials specific to levee improvement, such as bentonite used in slurry mixtures for seepage cutoff walls. However, the proposed project would not involve routine or long-term transport of such materials. None of the proposed improvements would involve the use of acutely hazardous materials. Therefore, no impact would occur and this issue is not evaluated further in this EIR.

Potential impacts from interference with emergency access and emergency evacuation plans are addressed in Section 4.17, “Transportation and Traffic.”

IMPACT ANALYSIS

| IMPACT | Possible Accidental Spills of Hazardous Materials Used during Construction Activities. Construction of the proposed improvements would involve the storage, use, and transport of hazardous materials such as fuels, oils, lubricants, and bentonite slurry during construction activities. Federal, State, and local hazardous materials regulations have been specifically designed to reduce the risk of accidental spills to the maximum extent practicable. However, there is the potential of a possible accidental spill of hazardous materials used during construction. Therefore, this impact would be potentially significant throughout the project study area. |

North Sacramento Streams Levee Improvements

The proposed project would not entail any unusual risks associated with the transport and handling of hazardous materials. Construction activities associated with levee reconstruction, encroachment removal, vegetation management, and the Conservation Strategy would use minor amounts of hazardous materials, such as fuels (gasoline and diesel), oils and lubricants, and cleaners (which could include solvents and corrosives in addition to soaps and detergents) that are commonly used in construction projects. Bentonite would be used where slurry cutoff walls are being constructed to remediate levee seepage conditions. Construction equipment such as
excavators, bulldozers, or bobcats could be used to implement various activities considered as part of encroachment removal, vegetation management, and the Conservation Strategy. Regulations governing hazardous materials transport are included in CCR Title 22, the California Vehicle Code (CCR Title 13), and the State Fire Marshal Regulations (CCR Title 19). Transport of hazardous materials can only be conducted under a registration issued by DTSC. ID numbers are issued by DTSC or EPA for tracking hazardous waste transporters and treatment, storage, and disposal facilities for hazardous materials. The ID number is used to identify the hazardous waste handler and to track waste from point of origin to final disposal, and all material transport takes place under manifest. Businesses that handle hazardous materials would be required by law to comply with Federal, State, and local laws, regulations, and policies regarding the handling, storage, reporting, tracking, and cleanup (if any accidental spills occurred) of hazardous materials, including preparation of a hazardous materials business plan and disclosure of hazardous materials inventories. The Sacramento County EMD is the CUPA responsible for oversight of local businesses that handle hazardous materials. Furthermore, the proposed project would not entail the use or storage of large quantities of hazardous or flammable materials. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction as indicated above and in the “Regulatory Setting”. However, these proposed project elements would have a potentially significant impact. Mitigation Measure HAZ-1, described below, has been identified to address this impact.

Mitigation Measure HAZ-1: Implement Conservation Strategy Measures such as a Spill Prevention and Control Plan to Reduce the Potential for Environmental Contamination during Construction Activities.

In addition to compliance with all applicable Federal, State, and local regulations, SAFCA shall implement the following measures as part of the Conservation Strategy to further reduce the risk of accidental spills and protect the environment:

- **Prepare and Implement a Spill Prevention and Control Plan.** A written spill prevention and control plan (SPCP) shall be prepared and implemented. The SPCP and all material necessary for its implementation shall be accessible on site prior to initiation of project construction and throughout the construction period. The SPCP shall include a plan for the emergency cleanup of any spills of fuel or other material. Employees/construction workers shall be provided the necessary information from the SPCP to prevent or reduce the discharge of pollutants from construction activities to waters and to use the appropriate measures should a spill occur. In the event of a spill, work shall stop immediately and the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Central Valley Regional Water Quality Control Board, and U.S. Army Corps of Engineers shall be notified within 24 hours.

- **Dispose Daily all Construction-related Materials and Equipment that Cannot be Secured at an Appropriate Disposal/Storage Site.** All litter, debris, unused materials, equipment, and supplies that cannot reasonably be secured shall be removed daily from the project work area and deposited at an appropriate disposal or storage site.

- **Remove Immediately All Construction-Related Pads/Debris from Work Sites Upon Completion.** All work pads and construction debris shall be removed from work sites immediately when work is completed at each site.
• **Use Safer Alternative Products to Protect Streams and Other Waters.** Every reasonable precaution shall be exercised to protect streams and other waters from pollution with fuels, oils, and other harmful materials. Safer alternative products (such as biodegradable hydraulic fluids) shall be used where feasible.

• **Prevent Any Contaminated Construction By-Products from Entering Flowing Waters; Collect and Transport Such By-Products to An Authorized Disposal Area.** Petroleum products, chemicals, fresh cement, and construction by-products containing, or water contaminated by, any such materials shall not be allowed to enter flowing waters and shall be collected and transported to an authorized upland disposal area.

• **Prevent Hazardous Petroleum or Other Hazardous Substances to Aquatic Life from Contaminating the Soil or Entering Waters of the State or U.S.** Gas, oil, other petroleum products, or any other substances that could be hazardous to aquatic life and resulting from project-related activities, shall be prevented from contaminating the soil and/or entering waters of the State and/or waters of the U.S.

• **Properly Maintain All Construction Vehicles and Equipment and Inspect Daily for Leaks; Remove and Repair Equipment/Vehicles with Leaks.** Construction vehicles and equipment shall be properly maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Vehicles and equipment shall be checked daily for leaks. If leaks are found, the equipment shall be removed from the site and shall not be used until the leaks are repaired.

• **Refuel and Service Equipment at Designated Refueling and Staging Areas.** Equipment shall be refueled and serviced at designated refueling and staging sites located on the crown or landside of the levee and at least 50 feet from active stream channels or other water bodies. All refueling, maintenance, and staging of equipment and vehicles shall be conducted in a location where a spill shall not drain directly toward aquatic habitat. Appropriate containment materials shall be installed to collect any discharge, and adequate materials for spill cleanup shall be maintained on-site throughout the construction period.

• **Store Heavy Equipment, Vehicles, and Supplies at Designated Staging Areas.** All heavy equipment, vehicles, and supplies shall be stored at the designated staging areas at the end of each work period.

• **Install an Impermeable Membrane Between the Ground and Any Hazardous Material in Construction Storage Areas.** Storage areas for construction material that contains hazardous or potentially toxic materials shall have an impermeable membrane between the ground and the hazardous material and shall be bermed as necessary to prevent the discharge of pollutants to groundwater and runoff water.

• **Use Water Trucks to Control Fugitive Dust during Construction.** Water (e.g., trucks, portable pumps with hoses) shall be used to control fugitive dust during temporary access road construction.
Use Only Nontoxic Materials and Materials Placed in Any Waters with No Coatings or Treatments Deleterious to Aquatic Organisms. All materials placed in streams, rivers, or other waters shall be nontoxic and shall not contain coatings or treatments or consist of substances deleterious to aquatic organisms that may leach into the surrounding environment in amounts harmful to aquatic organisms.

**Timing:** During construction activities.

**Responsibility:** Sacramento Area Flood Control Agency.

**Significance after Mitigation:** Implementation of Mitigation Measure HAZ-1 would reduce potentially significant construction-related hazmat impacts to a **less-than-significant level** by requiring preparation and implementation of a spill prevention and control plan along with other measures designed to prevent contamination of the environment from hazardous materials.

**Sacramento River East Levee Improvements**

As described above for the North Sacramento Streams Levee Improvements, construction activities in the Sacramento River East Levee Improvements area associated with levee reconstruction, encroachment removal, vegetation management, and the Conservation Strategy would use minor amounts of hazardous materials, such as fuels (gasoline and diesel), oils and lubricants, and cleaners (which could include solvents and corrosives in addition to soaps and detergents) that are commonly used in construction projects. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction as indicated above and in the Regulatory Setting. However, these proposed project elements would have a **potentially significant impact.** Mitigation Measure HAZ-1, described below, has been identified to address this impact.

**Mitigation Measure:** Implement Mitigation Measure HAZ-1 (Implement Conservation Strategy Measures such as a Spill Prevention and Control Plan to Reduce the Potential for Environmental Contamination during Construction Activities).

**Timing:** During construction activities.

**Responsibility:** Sacramento Area Flood Control Agency.

**Significance after Mitigation:** Implementation of Mitigation Measure HAZ-1 would reduce potentially significant construction-related hazmat impacts to a **less-than-significant level** by requiring preparation and implementation of a spill prevention and control plan along with other measures designed to prevent contamination of the environment from hazardous materials.

**American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal**

As described above for the North Sacramento Streams Levee Improvements, project-related activities in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area related to encroachment, vegetation removal, and the Conservation Strategy would also entail the use of minor amounts of hazardous materials for construction equipment, such as fuels, oils, and lubricants. Construction contractors...
would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction as indicated above and in the “Regulatory Setting”. However, these proposed project elements would have a potentially significant impact. Mitigation Measure HAZ-1, described below, has been identified to address this impact.

**Mitigation Measure:** Implement Mitigation Measure HAZ-1 (Implement Conservation Strategy Measures such as a Spill Prevention and Control Plan to Reduce the Potential for Environmental Contamination during Construction Activities).

**Timing:** During construction activities.

**Responsibility:** Sacramento Area Flood Control Agency.

**Significance after Mitigation:** Implementation of Mitigation Measure HAZ-1 would reduce potentially significant construction-related hazmat impacts to a less-than-significant level by requiring preparation and implementation of a spill prevention and control plan along with other measures designed to prevent contamination of the environment from hazardous materials.

**Natomas East Main Drainage Canal/Steelhead Creek Corridor Management Plan**

The proposed project would not entail any unusual risks associated with the transport and handling of hazardous materials. Construction activities associated with the NEMDC/Steelhead Creek CMP would use minor amounts of hazardous materials, such as fuels (gasoline and diesel), oils and lubricants, and cleaners (which could include solvents and corrosives in addition to soaps and detergents) that are commonly used in construction projects. Construction equipment such as excavators, bulldozers, or bobcats could be used to implement various activities considered as part of the NEMDC/Steelhead Creek CMP. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction as indicated above and in the “Regulatory Setting”. However, these proposed project elements would have a potentially significant impact. Mitigation Measure HAZ-1, described below, has been identified to address this impact.

**Mitigation Measure:** Implement Mitigation Measure HAZ-1 (Implement Conservation Strategy Measures such as a Spill Prevention and Control Plan to Reduce the Potential for Environmental Contamination during Construction Activities).

**Timing:** During construction activities.

**Responsibility:** Sacramento Area Flood Control Agency.

**Significance after Mitigation:** Implementation of Mitigation Measure HAZ-1 would reduce potentially significant construction-related hazmat impacts to a less-than-significant level by requiring preparation and implementation of a spill prevention and control plan along with other measures designed to prevent the possible contamination of the environment from hazardous materials.
Handling of Hazardous Materials within 0.25 Mile of a School. Project-related activities would entail the use of small quantities of hazards materials such as fuels, oils, and lubricants for construction equipment, as well as materials such as bentonite slurry for levee reconstruction. However, acutely hazardous materials would not be used, and the small quantities of materials used during construction would not represent a hazard to pupils or employees at schools in the project vicinity. Therefore, this impact would be less than significant throughout the project study area.

North Sacramento Streams Levee Improvements

Under California PRC Section 21151.4, unless certain conditions are first met, EIRs or mitigated negative declarations may not be certified or adopted for projects within 0.25 mile of schools that would involve constructing or altering facilities that meet any of the following criteria:

- might reasonably be anticipated to emit hazardous air emissions,
- would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the State threshold quantity specified in Section 25532(j) of the Health and Safety Code, or
- may pose a health or safety hazard to persons who would attend or would be employed at the school.

The Fairbanks Elementary School is located approximately 500 feet north of Reach ACN A, and the Martin Luther King Jr. Technology Academy (a middle school) is located approximately 150 feet south of Reach ACS B. Levee reconstruction, encroachment removal, vegetation management, and Conservation Strategy activities would occur within 0.25 mile of both schools.

Small quantities of hazardous materials such as fuels, oils, and lubricants would be used in construction equipment for the levee improvements and at the borrow areas, as well as the encroachment removal, vegetation management, and Conservation Strategy construction activities. In addition, materials specific to levee improvement, such as bentonite used in slurry mixtures for seepage cutoff walls, would also be used. However, none of these materials are classified as acutely hazardous. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction. For the reasons stated above, the use of these materials during construction would not represent a safety hazard for persons who would attend or be employed in either of the above-listed schools. Furthermore, given the temporary nature and short duration of each construction segment as each reach of the levee improvements are implemented, the proposed project is not expected to result in hazardous air emissions (i.e., toxic air contaminants [TACs]) in excess of screening levels. (For a detailed discussion and evaluation of TAC impacts, see Section 4.4, “Air Quality.”) Therefore, these proposed project elements would have a less-than-significant impact.

Mitigation Measure: No mitigation is required.

Sacramento River East Levee Improvements

The Leataata Floyd Elementary School and the adjacent Arthur J. Benjamin Health Professions High School are located approximately 1,200 feet southeast of work that would be performed in Reach 7. The Genevieve Didion
Elementary School is located approximately 1,200 feet southwest of Reach 17. The Merryhill Elementary School is located immediate adjacent to one of the proposed staging areas in the Pocket area. Levee reconstruction, encroachment removal, vegetation management, and Conservation Strategy activities would occur within 0.25 mile of both schools.

As described above, small quantities of hazardous materials such as fuels, oils, and lubricants would be used in construction equipment for the levee improvements and at the borrow areas, as well as the encroachment removal, vegetation management, and Conservation Strategy construction activities. In addition, materials specific to levee improvement, such as bentonite used in slurry mixtures for seepage cutoff walls, would also be used. However, none of these materials are classified as acutely hazardous. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction activities. For the reasons stated above, the use of these materials during construction would not represent a safety hazard for persons who would attend or be employed in either of the above-listed schools. Furthermore, given the temporary nature and short duration of each construction segment and each staging area as each reach of the levee improvements are implemented, the proposed project is not expected to result in hazardous air emissions (i.e., TACs) in excess of screening levels. (For a detailed discussion and evaluation of TAC impacts, see Section 4.4, “Air Quality.”) Therefore, these proposed project elements would have a less-than-significant impact.

**Mitigation Measure:** No mitigation is required.

**American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal**

Proposed activities in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area related to encroachment removal, vegetation management, and the Conservation Strategy would entail the use of minor amounts of hazardous materials for construction equipment, such as fuels, oils, and lubricants. Therefore, small quantities of hazardous materials could be used within 0.25 mile of a school along the Lower American River. For example, proposed encroachment removal on the east side of McClaren Drive (south of Arden Way) would occur within approximately 240 feet of the Del Dayo Elementary School.

There are no schools within 0.25 mile of the Beach Lake Levee or the Upper Beach Lake riparian planting site.

Hazardous materials associated with project-related construction activities would be used in very small amounts and for short periods of time. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction activities. For the same reasons previously stated above, the use of these materials during construction would not represent a safety hazard for persons who would attend or be employed in nearby schools and would not result in TAC emissions in excess of screening levels. (For a detailed discussion and evaluation of TAC impacts, see Section 4.4, “Air Quality.”) Therefore, these proposed project elements would have a less-than-significant impact.

**Mitigation Measure:** No mitigation is required.

**Natomas East Main Drainage Canal/Steelhead Creek Corridor Management Plan**

Implementing the NEMDC/Steelhead Creek CMP would entail the use of minor amounts of hazardous materials for construction equipment, such as fuels, oils, and lubricants. Therefore, small quantities of hazardous materials
could be used within 0.25 mile of a school. However, these hazardous materials would be used in very small amounts and for short periods of time. Construction contractors would be required to use, store, and transport hazardous materials in compliance with Federal, State, and local regulations during project construction activities. For the same reasons previously stated above, the use of these materials during construction would not represent a safety hazard for persons who would attend or be employed in nearby schools and would not result in TAC emissions in excess of screening levels. (For a detailed discussion and evaluation of TAC impacts, see Section 4.4, “Air Quality.”) Therefore, this proposed project element would have a less-than-significant impact.

Mitigation Measure: No mitigation is required.

**IMPACT HAZ-3**

Possible Exposure of People and the Environment to Existing Hazardous Materials, Including Cortese-Listed Sites. Project-related activities would occur in the vicinity of known hazardous material contamination sites and in the vicinity of underground pipelines carrying petroleum and natural gas, possibly exposing people and the environment to existing hazardous materials. Therefore, this impact would be potentially significant for the North Sacramento Streams and Sacramento River East Levee Improvements areas and American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal areas. The impact would be less than significant for the Natomas East Main Drainage Canal/Steelhead Creek Corridor Management Plan.

North Sacramento Streams Levee Improvements

Activities associated with obtaining levee reconstruction materials from the borrow sites and implementing the Conservation Strategy and would not result in exposure to hazardous materials because there are no open active hazardous materials sites within 0.25 mile of the areas where these project-related activities would occur (DTSC 2014, SWRCB 2014). Thus, the borrow sites and implementing the Conservation Strategy in the North Sacramento Streams Levee Improvements area are not likely to expose people or the environment to hazards associated with contaminated soil or groundwater. Therefore, these proposed project elements would have a less-than-significant impact.

Mitigation Measure: No mitigation is required.

As shown in Table 4.11-1, there are two open active Cortese-listed sites that are within 0.25 mile of areas where project-related earthmoving activities associated with levee reconstruction and vegetation management would occur. Both of these sites involve leaking underground storage tanks that have resulted in soil and groundwater contamination. The contaminated soil has been removed; however, groundwater remediation and monitoring are ongoing. Some encroachment removal work would also occur in areas where underground natural gas and petroleum pipelines are located. Finally, PG&E has indicated that it is investigating a potential mercury contamination issue at the potential Staging Area 1, where a limited amount of project-related ground-disturbing activity may occur. Thus, there is a potential that earthmoving activities could encounter contaminated soil or groundwater, and/or underground utility infrastructure containing hazardous substances, which could result in exposure of people or the environment to hazardous materials. Therefore, these proposed project elements would have a potentially significant impact. Mitigation Measures HAZ-3 and UTL-1, described below, have been identified to address this impact.

- SAFCA shall implement the following measures before and during construction to reduce potentially significant impacts associated with exposure to hazardous materials. Coordinate with PG&E regarding site cleanup activities to avoid construction worker exposure from potential mercury contamination, if Staging Area 1 is used.

- Prepare and implement a worker health and safety plan before the start of construction activities that identifies, at a minimum, the potential types of contaminants that could be encountered during construction activity; all appropriate worker, public health, and environmental protection equipment and procedures to be used during project activities; emergency response procedures; the most direct route to the nearest hospitals; and a Site Safety Officer. The plan shall describe actions to be taken should hazardous materials be encountered on-site, including the telephone numbers of local and state emergency hazmat response agencies.

If, during site preparation and construction activities, evidence of hazardous materials contamination is observed or suspected (e.g., stained or odorous soil or groundwater) cease immediately construction activities in the areas of the find. If contamination is observed or suspected, SAFCA shall retain a qualified hazardous materials specialist to assess the site and collect and analyze soil and/or water samples, as necessary. If contaminants are identified in the samples, SAFCA shall notify and consult with the appropriate Federal, State, and/or local agencies. Measures to remediate contamination and protect worker health and the environment shall be implemented in accordance with Federal, State, and local regulations before construction activities may resume at the site where contamination is encountered. Such measures could include, but are not limited to, preparation of a Phase I and/or Phase II Environmental Site Assessment, removal of contaminated soil, and pumping of groundwater into containment tanks. SAFCA may elect to implement cleanup measures, or to coordinate with the owner of the affected parcel to perform cleanup activities.

Mitigation Measure: Implement Mitigation Measure UTL-1 (Verify Utility Locations, Coordinate with Affected Utility Providers, Prepare and Implement a Response Plan, and Conduct Worker Training with Respect to Accidental Utility Damage).

**Timing:** Before and during construction activities.

**Responsibility:** Sacramento Area Flood Control Agency.

**Significance after Mitigation:** Implementation of Mitigation Measures HAZ-3 and UTL-1 would reduce the potentially significant impact associated with possible exposure to hazardous materials to a less-than-significant level because SAFCA would halt work if evidence of contamination was encountered, remediation would be performed or work would be relocated, and SAFCA would coordinate with underground pipeline owners to locate and safely move utility infrastructure.
Sacramento River East Levee Improvements

As discussed in Table 4.11-2, because of concerns that groundwater adjacent to the shop buildings at the Sacramento Regional County Sanitation District may have been contaminated, a monitoring well was installed at Glacier Way and South Landfill Way. Although the case is still listed as open in the GeoTracker database (SWRCB 2014), the monitoring well has been abandoned in accordance with Sacramento County permits. The database contains no evidence that contaminated groundwater was ever detected. Therefore, borrow activities at the Regional County Sanitation District site would not represent a hazard to people or the environment, particularly given that borrow obtained from this site is expected to come from existing stockpiles rather than from new excavation. Therefore, this proposed project element would have no impact.

Mitigation Measure: No mitigation is required.

None of the Conservation Strategy activities in the Sacramento River East Levee Improvements area would occur within 0.25 mile of a known hazardous material site. Therefore, this proposed project element would have no impact.

Mitigation Measure: No mitigation is required.

As shown in Table 4.11-2, there are seven open active Cortese-listed sites that are within 0.25 mile of areas where project-related earthmoving activities associated with levee reconstruction, encroachment removal, and vegetation management would occur. These sites involve leaking underground storage tanks and aboveground accidental spills that have resulted in soil and groundwater contamination. The contaminated soil has been removed; however groundwater remediation and monitoring are ongoing. Some encroachment removal work would also occur in areas where underground natural gas and petroleum pipelines are located. Thus, there is a potential that earthmoving activities associated with levee reconstruction, encroachment removal, and vegetation management could encounter contaminated soil or groundwater, and/or underground utility infrastructure containing hazardous substances, which could result in possible exposure of people or the environment to hazardous materials. Therefore, these proposed project elements would have a potentially significant impact. Mitigation Measures HAZ-3 and UTL-1, described below, have been identified to address this impact.


Mitigation Measure: Implement Mitigation Measure UTL-1 (Verify Utility Locations, Coordinate with Affected Utility Providers, Prepare and Implement a Response Plan, and Conduct Worker Training with Respect to Accidental Utility Damage).

Timing: Before and during construction activities.

Responsibility: Sacramento Area Flood Control Agency.

Significance after Mitigation: Implementation of Mitigation Measures HAZ-3 and UTL-1 would reduce the potentially significant impact associated with possible exposure to hazardous materials to a less-than-significant level because SAFCA would halt work if evidence of contamination was encountered, remediation would be
performed or work would be relocated, and SAFCA would coordinate with underground pipeline owners to locate and safely move utility infrastructure.

**American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal**

None of the vegetation management activities in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area would occur within 0.25 mile of any open, active hazardous material site (SWRCB 2014). Therefore, this proposed project element would have **no impact**.

**Mitigation Measure:** No mitigation is required.

Riparian planting would occur at the Woodlake site as part of the Conservation Strategy; however, only about 7 acres of the approximately 271 acres at this site would actually be used. There is an open active hazardous material site approximately 1,300 feet north of the northeast corner of the Woodlake site. Contaminated soil is being remediated, but the extent of groundwater contamination from petroleum hydrocarbons is still under investigation. However, groundwater at the contamination site is approximately 49 feet below the ground surface, and the direction of groundwater flow is generally to the north-northwest—away from the proposed riparian planting site (SWRCB 2014). The Camp Pollock riparian planting site is located approximately 1,600 feet southwest of a leaking underground storage tank cleanup site at 1940 Railroad Drive, where a gasoline leak resulted in soil and groundwater contamination. Remediation of contaminated soil has been completed. An ozone injection system using six injection wells to be installed on the northeast side of the existing building is proposed for future treatment of petroleum hydrocarbons in groundwater. The direction of groundwater flow is to the north-northeast—away from the Camp Pollock site (SWRCB 2014). There are no open, active hazardous material sites within 0.25 mile of the riparian planting area at the Upper Beach Lake site (SWRCB 2014). Thus, Conservation Strategy activities in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area are not likely to expose people or the environment from hazards associated with contaminated soil or groundwater. Therefore, this proposed project element would have a **less-than-significant impact**.

**Mitigation Measure:** No mitigation is required.

The American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area includes encroachment removal activities that could pose a hazard to people and the environment from accidental rupture of underground natural gas and petroleum pipelines. Therefore, this proposed project element would have a **potentially significant impact**. Mitigation Measure UTL-1, described below, has been identified to address this impact.

**Mitigation Measure:** Implement Mitigation Measure UTL-1 (Verify Utility Locations, Coordinate with Affected Utility Providers, Prepare and Implement a Response Plan, and Conduct Worker Training with Respect to Accidental Utility Damage).

**Timing:** Before and during construction activities.

**Responsibility:** Sacramento Area Flood Control Agency.
Significance after Mitigation: Implementation of Mitigation Measure UTL-1 would reduce the potentially significant impact associated with possible exposure to hazardous materials from pipeline rupture to a less-than-significant level because SAFCA would coordinate with underground pipeline owners to locate and safely move utility infrastructure.

Natomas East Main Drainage Canal/Steelhead Creek Corridor Management Plan

Site 18A, where riparian plantings would occur as part of the NEMDC/Steelhead Creek CMP, is located approximately 600 feet west of a leaking underground storage tank cleanup site at 1940 Railroad Drive, where a gasoline leak resulted in soil and groundwater contamination. Remediation of contaminated soil has been completed. Groundwater treatment for contamination with petroleum hydrocarbons is planned in the future but has not yet been implemented. However, the direction of groundwater flow is to the north-northeast—away from Site 18A (SWRCB 2014).

As shown in Table 4.11-1, there are two open active listings of hazardous materials sites within 100 and 300 feet, respectively, of Arcade Creek. However, both of these sites have been remediated (monitoring is ongoing), and work associated with the NEMDC/Steelhead Creek CMP in Arcade Creek would be associated with the stream channel and the associated riparian corridor (which are on the waterside of the levee, north of these sites—in the opposite direction of groundwater flow).

In addition, groundwater from McClellan Airfield that has been treated for VOC contamination is discharged to Magpie Creek, which flows southwesterly into NEMDC/Steelhead Creek. Although work would occur in the stream channel of NEMDC/Steelhead Creek, the discharged groundwater has been treated to meet EPA and SWRCB standards, and therefore would not pose a health hazard to construction workers. Groundwater underneath McClellan Airfield flows in a southwesterly direction—towards Arcade Creek—but is located more than 100 feet below the ground surface (Air Force Civil Engineering Center 2010). As of late 2009, the southernmost boundary of the contaminated groundwater plume was located just north of Nelson Street, which is approximately 1.65 miles northeast of the Arcade Creek work area. Because Arcade Creek channel reconstruction activities associated with the NEMDC/Steelhead Creek CMP would only occur a few feet below the ground surface, construction workers would not come into contact with any untreated, contaminated groundwater.

There are no other open, active hazardous materials sites within 0.25 mile of the areas where activities associated with the NEMDC/Steelhead Creek CMP would occur (DTSC 2014, SWRCB 2014).

Therefore, activities associated with the NEMDC/Steelhead Creek CMP are not expected to result in exposure of construction workers or the general public to health hazards associated with hazardous materials, and this proposed project element would have a less-than-significant impact.

Mitigation Measure: No mitigation is required.
IMPACT

HAZ-4

Possible Creation of Safety Hazards, Including Birdstrike, in the Vicinity of a Public or Private Airport. Reclamation of Borrow Site 3 could result in the creation of wetlands that could attract increased numbers of waterfowl, thereby resulting in an increased wildlife strike hazard at the Rio Linda Airport. Therefore, this impact would be potentially significant for the North Sacramento Streams Levee Improvements area. Although the Conservation Strategy would result in habitat improvements that could attract increased numbers of birds in the vicinity of the McClellan and Borges-Clarksburg Airports, existing water-dependent bird habitat is already present and a substantial increase in birdstrikes is not anticipated because existing standing water would be removed as part of the Conservation Strategy. Therefore, this impact would be less than significant for the North Sacramento Streams and Sacramento River East Levee Improvements areas. There would be no impact for the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area because there are no project-related activities that would affect airport safety.

North Sacramento Streams Levee Improvements

The proposed levee reconstruction, activities at staging areas, encroachment removal, and vegetation management activities would not entail construction of any tall buildings or other structures that could interfere with flight patterns or affect operations at McClellan Airfield or Rio Linda Airport. Therefore, these proposed project elements would have no impact.

Mitigation Measure: No mitigation is required.

Birds can be ingested into the engines of aircraft, or make contact with aircraft propellers, which is termed a “strike” hazard. Waterfowl (30 percent), gulls (22 percent), raptors (20 percent), and pigeons/doves (7 percent) represented 79 percent of the reported bird strikes causing damage to U.S. civil aircraft between 1990 and 2012 (Bird Strike Committee USA 2014). The FAA (2007) provides guidance regarding the siting of facilities and projects that may result in birdstrike within 5,000 of an airport serving piston-powered aircraft or within 10,000 feet of an airport serving turbine-powered aircraft. The runway at the Rio Linda Airport is located approximately 500 feet east of Dry Creek, approximately 850 feet northeast of Borrow Site 3, and approximately 900 feet north of Robla Creek. There are three existing 10-acre waterski lakes (totaling about 30 acres) immediately adjacent to the east side of the runway. However, these lakes are relatively deep-sided and contain relatively deep water, which tends to discourage foraging waterfowl. Therefore, the existing waterski lakes do not present a substantial birdstrike hazard. The FAA wildlife strike database contains no strike reports for Rio Linda Airport for the 24-year period 1990–2014 (FAA 2014). Reclamation of Borrow Site 3 may include construction of a created wetland up to about 10 acres in size. Depending on the type of wetland that is created, the birdstrike hazard at Rio Linda Airport could increase. For example, relatively shallow freshwater marsh habitat with large areas of permanent open water would likely attract larger numbers of waterfowl than seasonal wetlands that are only ponded for several weeks after heavy or persistent rainfall. Because the details as to the type, size, and configuration of wetland that would be created are not available at this time, there is a potential that the birdstrike hazard at Rio Linda Airport could increase from project-related reclamation of Borrow Site 3. Therefore, this proposed project element would have a potentially significant impact. Mitigation Measure HAZ-4, described below, has been identified to address this impact.
Mitigation Measure HAZ-4: Avoid Construction of Wetlands at Borrow Site 3, or Design Wetlands that Discourage Waterfowl.

To prevent an increase in birdstrike hazards at Rio Linda Airport, avoidance of created wetlands at Borrow Site 3 shall be considered by SAFCA.

If wetlands are created at this location as part of project-related reclamation plans, reclamation of Borrow Site 3 shall be implemented in a manner that does not increase, in comparison to existing conditions, attraction of birds that pose a moderate- to high-strike hazard (e.g., ducks, herons, and hawks) to aircraft that use Rio Linda Airport. A reclamation/restoration plan shall be developed and implemented by SAFCA that includes measures to minimize increase in attraction of hazardous wildlife, particularly waterfowl, in the site design. Such measures may include grading to create aquatic conditions that are not favored by waterfowl (e.g., relatively deep, steep-sided open water areas), minimizing the amount of open water habitat, and/or grading of the site to facilitate drainage after rain events.

Timing: During borrow site reclamation design.

Responsibility: Sacramento Area Flood Control Agency.

Significance after Mitigation: Implementation of Mitigation Measure HAZ-4 would reduce the potentially significant impact associated with possible increased wildlife strike hazards at Rio Linda Airport to a less-than-significant level because either wetlands would not be created at Borrow Site 3, or wetlands would be specifically designed to minimize attraction of waterfowl.

Sacramento River East Levee Improvements

The proposed levee reconstruction, encroachment removal, and vegetation management activities would not entail construction of any tall buildings or other structures that could interfere with flight patterns or affect operations at the Sacramento Executive or Borges-Clarksburg Airports. Therefore, these proposed project elements would have no impact.

Mitigation Measure: No mitigation is required.

Implementation of the Conservation Strategy would entail planting native trees along a total of approximately 10 acres of nonnative grassland gaps in oak woodland and riparian vegetation along the Sacramento River. In addition, riparian plantings are proposed on an approximately 75-acre site north of the Stone Lake Wildlife Refuge. These sites are in the vicinity of the Borges-Clarksburg Airport, on the opposite side of the Sacramento River. Although these tree and riparian planting activities could increase the amount of available nesting habitat for certain types of bird species, such habitat is already present throughout the levees along the Sacramento River and in the vicinity of Laguna and Morrison Creeks (east of the Borges-Clarksburg Airport), as well as Mungers Lake and Greenhaven Lake (on the west side of the Sacramento Executive Airport). Therefore, a substantial increase in the number of bird species that use the Sacramento River corridor over existing conditions is not anticipated, and the proposed Conservation Strategy would not result in a substantial increase in hazardous wildlife in the form of birdstrikes near an airport. Thus, this proposed project element would have a less-than-significant impact.
**Mitigation Measure:** No mitigation is required.

**American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal**

There are no project-related activities along the Lower American River that would occur in the vicinity of an airport, nor would any of the activities proposed in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area entail construction of any tall buildings or other structures that could interfere with flight patterns or affect operations at the Borges-Clarksburg Airport. Mitigation for vegetation management activities along the Beach Lake Levee would be provided in the form of riparian plantings at the 20-acre Upper Beach Lake Wildlife site, which is located approximately 1 mile northeast of the Borges-Clarksburg airport. However, this riparian planting area would not include the creation of any new wetted areas. The FAA wildlife strike database contains no strike reports for the Borges-Clarksburg Airport for the 24-year period 1990–2014 (FAA 2014). Although the riparian planting site could increase the amount of available nesting habitat for certain types of bird species, such habitat is already present throughout the levees along the Sacramento River and in the vicinity of Laguna and Morrison Creeks, as well as Mungers and Greenhaven Lakes. Thus, a substantial increase in the number of bird species that could result in a birdstrike hazard for the Borges-Clarksburg Airport is not anticipated. Therefore, these proposed project elements would have a less-than-significant impact.

**Mitigation Measure:** No mitigation is required.

**Natomas East Main Drainage Canal/Steelhead Creek Corridor Management Plan**

The Arcade, Robla, and NEMDC/Steelhead Creeks riparian corridors currently contain areas of slow-moving water created by beaver dams, which provide habitat for birds and waterfowl. The southern end of McClellan Airfield is located approximately 1.8 miles (about 9,500 feet) northeast of the Arcade Creek corridor. The habitat improvements that are proposed as part of the NEMDC/Steelhead Creek CMP would entail modification of the NEMDC/Steelhead Creek channel to reestablish an active flow channel and riparian enhancement and restoration along the creeks. These improvements would primarily benefit fish species, along with some riparian-dependent bird species.

However, because an active flow channel in NEMDC/Steelhead Creek would be reestablished as part of the NEMDC/Steelhead Creek CMP and the amount of riparian habitat along the creeks would be increased, a slight reduction in the number of waterfowl that use the creek corridors as compared to existing conditions could occur, which would provide a benefit to airport safety. Thus, the proposed NEMDC/Steelhead Creek CMP would not result in a substantial increase in hazardous wildlife in the form of birdstrikes near an airport, and this proposed project element would have a less-than-significant impact.

**Mitigation Measure:** No mitigation is required.

**IMPACT**

| HAZ-5 Possible Creation of Wildland Fire Hazards. | Construction activities could result in the ignition and spread of wildland fires from accidental discharge of sparks in vegetated areas. This impact would be potentially significant throughout the project study area. |

AECOM North Sacramento Streams, Sacramento River East Levee, Lower American River, and Related Flood Improvements Project DEIR Hazards and Hazardous Materials 4.11-28 Sacramento Area Flood Control Agency
North Sacramento Streams Levee Improvements

The levee reconstruction, encroachment removal, vegetation management, and Conservation Strategy activities would be implemented in various locations with natural settings where physical and weather conditions may combine to lead to a high risk of fire hazard. Although CAL FIRE (2007, 2008) has determined that the areas where project-related activities would occur are not within a very high fire hazard severity zone, vegetation is present in all areas where work would occur. In some areas where nonnative, invasive vegetation has become established, dense thickets of understory shrubs are present. Most of the project-related work would occur during the summer and fall months when hot and dry conditions would enable rapid spread of fires. Construction equipment can emit sparks that could ignite fires, thereby possibly exposing people or structures to a significant risk of loss, injury, or death. Therefore, these proposed project elements would have a potentially significant impact. Mitigation Measure HAZ-5, described below, has been identified to address this impact.

Mitigation Measure HAZ-5: Prepare and Implement a Fire Prevention Plan.

A fire prevention plan shall be prepared and implemented by SAFCA in coordination with the appropriate emergency service and/or fire suppression agencies of the applicable local or State jurisdictions before the start of any construction activities. The plan shall describe fire prevention and response methods, including fire precaution, requirements for spark arrestors on equipment, and suppression measures that are consistent with the policies and standards of the affected jurisdictions. When heavy equipment is used for construction during the dry season, a water truck shall be maintained on the construction site. Materials and equipment required for implementation of the plan shall be available on the construction site. Training shall be provided to all construction personnel regarding fire safety, and all personnel shall be made familiar with the contents of the plan before the start of construction activities.

Timing: Before and during construction activities.

Responsibility: Sacramento Area Flood Control Agency.

Significance after Mitigation: Implementation of Mitigation Measure HAZ-5 would reduce the potentially significant impact associated with the possible creation of wildland fire hazards to a less-than-significant level because a fire prevention plan would be prepared and implemented.

Sacramento River East Levee Improvements

The levee reconstruction, encroachment removal, vegetation management, and Conservation Strategy activities would be implemented in various locations with natural settings where physical and weather conditions may combine to lead to a high risk of fire hazard. Although CAL FIRE (2007, 2008) has determined that the areas where project-related activities would occur are not within a very high fire hazard severity zone, vegetation is present in all areas where work would occur. Thus, impacts for the Sacramento River East Levee Improvements area would be the same as those described above for the North Sacramento Streams Levee Improvements area. Therefore, these proposed project elements would have a potentially significant impact. Mitigation Measure HAZ-5, described below, has been identified to address this impact.
Mitigation Measure: Implement Mitigation Measure HAZ-5 (Prepare and Implement a Fire Prevention Plan).

Significance after Mitigation: Implementation of Mitigation Measure HAZ-5 would reduce the potentially significant impact associated with the possible creation of wildland fire hazards to a less-than-significant level because a fire prevention plan would be prepared and implemented.

American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal

Encroachment removal, vegetation management, and Conservation Strategy activities in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area would entail the operation of construction equipment that could emit sparks and ignite a wildfire. Vegetation is present throughout the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area. Most of the project-related work would occur during the summer and fall months when hot and dry conditions would enable rapid spread of fires. Therefore, people or structures could be exposed to a significant risk of loss, injury, or death from wildfires, and these proposed project elements would have a potentially significant impact. Mitigation Measure HAZ-5, described below, has been identified to address this impact.

Mitigation Measure: Implement Mitigation Measure HAZ-5 (Prepare and Implement a Fire Prevention Plan).

Significance after Mitigation: Implementation of Mitigation Measure HAZ-5 would reduce the potentially significant impact associated with the possible creation of wildland fire hazards to a less-than-significant level because a fire prevention plan would be prepared and implemented.

Natomas East Main Drainage Canal/Steelhead Creek Corridor Management Plan

The NEMDC/Steelhead Creek CMP activities would be implemented in various locations with natural settings where physical and weather conditions may combine to lead to a high risk of fire hazard. Although CAL FIRE (2007, 2008) has determined that the areas where project-related activities would occur are not within a very high fire hazard severity zone, vegetation is present in all areas where work would occur. In some areas where nonnative, invasive vegetation has become established, dense thickets of understory shrubs are present. Most of the project-related work would occur during the summer and fall months when hot and dry conditions would enable rapid spread of fires. Construction equipment can emit sparks that could ignite fires, thereby exposing people or structures to a significant risk of loss, injury, or death. Therefore, this proposed project element would have a potentially significant impact. Mitigation Measure HAZ-5, described below, has been identified to address this impact.

Mitigation Measure: Implement Mitigation Measure HAZ-5 (Prepare and Implement a Fire Prevention Plan).

Significance after Mitigation: Implementation of Mitigation Measure HAZ-5 would reduce the potentially significant impact associated with the possible creation of wildland fire hazards to a less-than-significant level because a fire prevention plan would be prepared and implemented.
Create a Public Health Hazard from Increased Exposure to Mosquito-Borne Diseases by Substantially Increasing the Amount of Mosquito Habitat. Implementing the Conservation Strategy in the North Sacramento Streams Levee Improvements area would reduce the amount of mosquito-breeding habitat because the amount of standing water would be reduced as beaver dams are removed. This impact would be beneficial and less than significant for the North Sacramento Streams Levee Improvements area. There would be no impact in the Sacramento River East Levee Improvements area or the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area because there are no project-related activities that would affect mosquito habitat.

North Sacramento Streams Levee Improvements

The proposed levee reconstruction, encroachment removal, vegetation management, and Conservation Strategy activities would not change the existing mosquito habitat that is present in the region, and therefore these proposed project elements would have no impact related to mosquito-borne diseases.

Mitigation Measure: No mitigation is required.

Sacramento River East Levee Improvements

There are no project-related activities in the Sacramento River East Levee Improvements area that would affect mosquito habitat or the incidence of mosquito-borne diseases. Therefore, these proposed project elements would have no impact.

Mitigation Measure: No mitigation is required.

American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal

There are no project-related activities in the American River and Beach Lake Levees High-Hazard Levee Encroachment and Vegetation Removal area that would affect mosquito habitat or the incidence of mosquito-borne diseases. Therefore, these proposed project elements would have no impact.

Mitigation Measure: No mitigation is required.

Natomas East Main Drainage Canal/Steelhead Creek Corridor Management Plan

Some areas along Arcade, Lower Dry, and NEMDC/Steelhead Creeks contain standing water due to the proliferation of beaver dams. Standing water, particularly in aquatic habitat areas, serves as a mosquito-breeding ground. However, as part of the NEMDC/Steelhead Creek CMP, SAFCA plans to develop and implement a long-term program of beaver control to reduce beaver populations. SAFCA would coordinate with SYMVC and local City and County health departments to expand a program to gradually eliminate shallow ponding outside of the low-flow channels, primarily through beaver dam removal. These actions would result in a reduction of mosquito-breeding grounds, and therefore a decrease in mosquito populations over the long term. Therefore, the NEMDC/Steelhead Creek CMP would reduce the risk of mosquito-borne human diseases in the region, and this proposed project element would result in a beneficial, less-than-significant impact.

Mitigation Measure: No mitigation is required.
**RESIDUAL SIGNIFICANT IMPACTS**

Impacts related to handling of hazardous materials within 0.25 mile of a school and exposure to mosquito-borne diseases would be less than significant. With implementation of Mitigation Measures HAZ-1, HAZ-3, UTL-1, HAZ-4, and HAZ-5, impacts related to possible accidental spills of hazardous materials used during project construction activities, possible exposure to known hazardous materials, possible creation of birdstrike hazards at Rio Linda Airport, and possible creation of wildland fire hazards would be reduced to less-than-significant levels. Therefore, no residual significant impacts would occur.